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Professional Audio in Production

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Meet the team

Editor – Jory MacKay
jory.mackay@intentmedia.co.uk

Deputy Editor – Jake Young
jake.young@intentmedia.co.uk

Managing Editor – Jo Ruddock
jo.ruddock@intentmedia.co.uk

Commercial Director – Darrell Carter
darrell.carter@intentmedia.co.uk

Group Head of Design & Production – Adam Butler
adam.butler@intentmedia.co.uk

Production Executive – Jason Dowie
jason.dowie@intentmedia.co.uk

Designer – Jat Garcha
jat.garcha@intentmedia.co.uk

Press releases to:
pressreleases@intentmedia.co.uk

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email: audiomedia.subscriptions@c-cms.com

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"While there is that 'something' that only vintage gear can bring to the table, the convenience that modern technology allows is a creative tool in itself."

While researching a feature for an upcoming issue it struck me just how much cultural weight we give to things that are essentially, well, old.

History gives weight to most things that surround us on a daily basis. For some reason we believe that just because some 'thing' has stood the test of time that it is validated in the present.

Think of the connotations of the ways in which we describe things like films, albums, games, and gear: showing off your 'vintage' or 'classic' gear sounds a lot nicer than talking about your old 1176 or that used SSL now doesn't it?

The vintage vs. new debate is nothing new (no pun intended), and in the pro-audio world especially it will never disappear as long as we spend hours on forums and websites debating the merits of this or that and championing our favourite piece of vintage esoteric gear (or, heaven forbid, spouting off about the 'game changing' features of the latest technology).

This is a dividing conversation and one that is just about impossible to answer without grossly offending at least one person. For me, this debate has a long and storied history. I started my life in audio as a touring and session guitar player who complemented his measly income from royalties and live shows like many others by working in a music store. My day-to-day was this debate: old vs. new; vintage/classic vs. modern; or even analogue vs. digital.

I found myself buying into the cult of vintage, buying gear from the 70s for its 'vibe' and selling my soul (along with other bodily fluids) just to get my hands on that 60s Les Paul I had on layaway at my shop. A trip to my tech and a diagnosis of a wonky truss rod later and I was back, switching my set-up for kit that was modern, straight-from-the-factory, and cold, hard digital. But the sound wasn't 'there'. Plus, when a few key pedals decided to randomly die on stage during a set they ended up meeting a messy end when I 'accidentally' threw them against the venue wall.

In my personal experience there is no black and white with this debate – there is no definitive statement of which way is better. While there is that 'something' that only vintage gear can bring to the table, the convenience that modern technology allows is a creative tool in itself, and one that anyone who stops being so damned stubborn can see in a second (just ask mixing legend Gareth Jones who I interviewed this month on page 46).

The only practical way is to find a happy medium. Keep your vintage vibe and your esoteric kit that lets you tweak and create one-off sounds, but find a way to work it into your modern workflow.

We're lucky enough to live in a time where you can have the best of both worlds and we need to take advantage of that. ■

Jory MacKay, Editor

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New baby

The Genelec family expands with the new 8010

Producers and recording musicians everywhere rely on Genelec 8000 Series monitors for the unadulterated truth about their mixes. But what happens when you're away from the studio?

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Visit the Genelec family of monitors and see the new baby at www.genelec.com

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PreSonus Unlocks SL Room Control

PreSonus has announced availability of SL Room Control, a free, powerful, and easy-to-use system-control and performance-monitoring software for StudioLive AI Active Integration loudspeakers. The software runs under Mac OS X 10.7 and later, Windows 7 or 8, and iOS 7 and later for Apple iPad 2 or later.

SL Room Control gives users the equivalent control of a rack-mount loudspeaker-management system and it works wirelessly or over a wired (Ethernet) local area network.

The software provides access to a suite of editing controls for customising each StudioLive AI-series speaker on the network to compensate for room anomalies, create delay systems, eliminate feedback, and more. These features include a 500ms alignment delay (in 0.1ms increments); eight-band parametric EQ; eight notch filters (0.72 of one half-step) for surgical frequency removal; input-level control to limit the maximum output of the speaker; mute; and solo.

Using the software it is possible to remotely select any of four DSP contours that customise the loudspeaker for normal operation, playing low-bitrate MP3s, floor-monitor operation, or extended low-frequency boost for the StudioLive 18sAI subwoofer. Users can also remote control the 100Hz highpass filter on each full-range model and the polarity reverse on the 18sAI subwoofer.

With SL Room Control, it is also possible to edit, save, recall, and share speaker-setup parameters, as well as set custom labels and comments for each speaker. In addition, speakers can be grouped in order to manage specific parts of the system, then save all settings for the entire system in a single preset.

SL Room Control for Mac OS X and Windows is free to registered StudioLive AI-series loudspeaker owners and can be downloaded from the customer's online My PreSonus account. SL Room Control for iPad is a free download from the Apple App Store.

www.presonus.com

New Serpent Audio 500 Series

New York-based Serpent Audio and KMR Audio have introduced two new 500 series products: the Chimera, an optical compressor based on the LA-3A, and the Send N' Blend, a dedicated 'mix and blend' control module for out-of-the-box parallel processing.

The Serpent Audio Chimera uses a T4B optical cell for gain reduction, which is responsible for the compression characteristics of both Urei/Teletronix's LA-2A and LA-3A compressors. Combined with an all-discrete circuit design, Class AB transistor output, and transistor balanced input and output, the Chimera is said to produce a thick, rich, and smooth opto compression sound.

It includes a steel enclosure and cover, Orange Drop and Elna capacitors, Sifam vu Meter, hard bypass and PCX power monitoring. A compress/limit mode switch gives users the same option as offered by the original LA-3A. The Chimera also features a custom wound output and EL transformers, which have been made to meet the original specifications.

The Send N' Blend features a dry signal which connects to the standard XLR input of a 500 series chassis, and a wet signal accessible at the front via the TRS jack input located at the front of the unit. The Wet signal can also be routed to the 'Omniport' connection at the back of a workhorse or the 'Input 2' on a Purple Audio Sweet 10 Chassis. A three-way switch lets users bypass the dry or wet signal while the blend position gives control of the amount of dry or wet signal via the main control knob.

The Send N' Blend uses the same core audio path as the SB4001 Mixbuss compressor and boasts Elna capacitors and a sealed Alps potentiometer.

www.kmraudio.com

Waves Introduces the Abbey Road Collection

Developed in association with Abbey Road Studios, the Waves Abbey Road Collection features a lineup of plug-ins that model the studios' microphones, consoles, tape machines, and signature effects.

The Waves Abbey Road Collection includes the REDD consoles, the RS56 Passive EQ ('the Curve Bender'), and the J37 Tape, as well as the Vintage King's Microphones and the Reel ADT. All of these plug-ins are modelled on the original, rare, and often exclusive Abbey Road Studios hardware, providing users with legendary sound in the studio or live on stage.

www.abbeyroad.com
www.waves.com

Shure Announces ShurePlus Channels

Shure has revealed ShurePlus Channels, an iOS-based mobile device application that enables real-time remote monitoring and controlling of several Shure wireless systems, such as Axient, ULX-D Digital Wireless, the newly launched QLX-D Digital Wireless, as well as the PSM1000 Personal Monitor System.

Supported on Apple mobile devices running iOS 7, ShurePlus Channels relays critical channel information including RF signal strength, audio levels, and remaining battery life, and allows remote adjustment of frequency assignments, audio gain, muting, and more.

This basic version to monitor the systems is free. Through additional in-app purchases, users can further unlock the ability to remotely control their Shure wireless system and make changes to channel parameters.

When connected to a dedicated WiFi network, ShurePlus Channels automatically discovers compatible Shure hardware. When combined with ShowLink Remote Control for Axient, ShurePlus Channels allows for simultaneous adjustment of transmitter and receiver settings.

The ShurePlus Channels iOS app will be available for download from the Apple App Store in 62 EMEA countries this summer.

www.shure.com

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New H9 EQ Algorithm

Eventide has released a new version of its H9 Control app for Windows, Mac, and iOS that includes a number of UI enhancements suggested by users and delivers a new algorithm: EQ Compressor for H9.

EQ Compressor combines a multi-featured, parametric equaliser with a dynamic, intuitive compressor to create a powerful tone-shaping tool for guitar, voice, or any spectrally rich sound.

The EQ section is comprised of four independent filters: two parametric bands, a low shelf, and a high shelf.

The compressor section can be placed before or after the EQ and features up to 12dB of boost, enabling users to emphasise, harness, and control the parts of a sound wanted to shine through a mix.

www.eventide.com

Focusrite Announces Saffire PRO 26

Focusrite has revealed Saffire PRO 26, the latest addition to its Saffire PRO range of FireWire/Thunderbolt-compatible audio interfaces. Designed with both studio recording and live musicians in mind, Saffire PRO 26 features a selection of professional analogue and digital I/O options built into a portable chassis.

A total of 18 inputs and eight outputs includes four preamps, two instrument inputs, two headphone outputs, six line outputs, and ADAT & S/PDIF connectivity. Like all Saffire interfaces, Saffire PRO 26 connects seamlessly to a Thunderbolt port via a FireWire to Thunderbolt adaptor (not included) or directly to a FireWire 800 port with the cable provided.

The four Focusrite preamps allow recording flexibility and ensure low noise and distortion

with plenty of headroom to capture the full dynamic range of even the loudest drum-kit, while 24-bit/96kHz digital conversion and JetPLL jitter-elimination technology maintain audio quality in analogue and digital domains.

www.focusrite.com

Harrison Releases Mixbus Update

Harrison has announced version 2.5 of its Mixbus DAW. In addition to program improvements, the update also includes three new plug-in demos from Harrison's XTools for Mixbus plug-in series.

The XT-EG Expander/

Gate provides fast gating or expansion with precision timing; the XT-DS De-Esser provides fast, accurate De-Essing of sibilant tracks; and the XT-VC Vocal Character uses proprietary technology to track the pitch of the input signal, and EQ the signal based on the note played.

www.harrisonconsoles.com

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Universal Audio Brings Neve to the UAD Platform

Universal Audio has released version 7.7 of its UAD software, which includes the new Neve-endorsed 1073 Preamp & EQ Collection. Other features include AAX 64 Windows 7 support for Pro Tools 11, Mac Thunderbolt PCIe audio driver support, expanded compatibility for Apollo Twin and UAD devices, and console input labelling.

Based on one of the most revered preamp and EQ circuits, the UA team incorporated all 10 clipping points from the preamp and EQ circuitry, as well as Unison technology integration with the Apollo and Apollo Twin audio interfaces. This makes the new plug-in a true end-to-end circuit emulation of the original Neve 1073 channel amplifier.

The plug-in also features presets from famous Neve 1073 users, including Joe Chiccarelli (The Strokes, U2), Jacquire King (Kings of Leon, Norah Jones) and Joel Hamilton (Pretty Lights, Sparklehorse).

In addition, Windows 7 Pro Tools users now benefit from features such as offline bounce, AudioSuite processing for file-based workflows, and multi-mono plug-in support (UA has also said it will continue to support RTAS Windows versions of UAD plug-ins for PT10 users).

Apollo and Apollo 16 owners can now benefit from the ultra-fast PCIe audio drivers that provide high-bandwidth, low-latency performance on all Thunderbolt-equipped Macs. This update works with existing Thunderbolt Option cards via a free firmware update.

With the included free firmware update, Apollo Twin users can add even more UAD plug-in processing power by chaining a UAD-2 Satellite (via Thunderbolt-to-FireWire adapter) or UAD-2 PCIe card (via a supported Thunderbolt Chassis) to their system.

www.uaudio.com

Nugen Audio's VisLM Now Supports 7.1

To meet the evolving loudness requirements of the games industry, Nugen Audio's VisLM loudness metering plug-in now includes support for 7.1 surround audio for the Xbox One console and the Audio Standards Working Group (ASWG) standard for PlayStation development.

VisLM provides a standard-compliant way to measure, compare, and contrast loudness during production, broadcast, post production, and quality assurance, on the fly or after the fact for entire sections of audio. With detailed, objective loudness measurement, history, and logging facilities, VisLM supports ITU, ATSC, EBU, and Game Audio standards to ensure loudness compliance for titles to be distributed virtually anywhere in the world. In addition to supporting channels recorded in 7.1 format, the latest version of VisLM now offers support for the VST3 plug-in format, improved routing in the stand-alone mode, and a new analyse/render option.

The latest version of VisLM with 7.1 support is available as a free upgrade for current VisLM users.

www.nugenaudio.com

New Violet Design Mics

Violet Design has introduced two new microphones: The Atomic (pictured) and The Maestro.

The Atomic is a warm condenser microphone, making it a versatile studio microphone and a good choice for vocal recording. It combines a single-membrane VD21 capsule and a discrete Class A preamplifier with transformer-less output.

The large-sized head creates a free-floating environment for the capsule, which is beneficial in creating a natural and uncompressed signal. The VD21 membrane is said to be extremely sensitive and picks up impulses very quickly for a transparent and dynamic performance recording.

The Maestro combines a dual-membrane VD27 capsule and a discrete Class A preamplifier with transformer-less output. The large-sized head ensures minimal internal resonances and reflexions, and as a result the capsule sounds more detailed and airy. Very low self-noise and distortions are the result of improved electronics. With a medium-bright tone The Maestro is designed as an all-round studio microphone.

www.violet-design.com

RECORDING

WSDG Gives Blessing to The Church Studios

In October 2013, multi-platinum producer Paul Epworth purchased The Church Studios and signed the Walters-Storyk Design Group (WSDG) and Miloco Builds to completely reconfigure its SSL room and put together a writing room. Jake Young spoke with studio architect John Storyk (Electric Lady Studios, Jungle City Studios), about the restoration so far.

The SSL room at Church Studios now under construction

First off, tell me how you got involved in the project.

Paul worked at our award-wining studio that we did two years ago for Ann Mincieli, Jungle City Studios in New York. What he liked about that was the whole front wall construction based on Augspurger monitors. Essentially he wanted that in London. To our knowledge that kind of monitoring system and that approach to control and design does not exist in London for better or for worse. Some pictures and drawings came over of The Church studio to see if it was even physically possible size-wise. The original control room layout, which is pretty close to what's going to be built now, was not terribly different in size than Jungle City Studios. The first study we did was to lay them on top of each other, because originally what we thought would happen was we'd just remove the front wall and rebuild the Jungle City Studios wall and at the same time spruce up the space. And that's how this started.

What were the main challenges of reconfiguring the SSL room?

Very quickly into the project it was discovered that there was basically no isolation between the ground floor and the upstairs room. That was a huge setback. I just assumed it was a working studio and it turns out that the way everybody worked all these years was they just never used them simultaneously. I was quite surprised but nobody was more surprised than Paul! Over the month with Miloco and Pete Hofmann [project manager and technical director] we kept uncovering things and taking things out until one day it was obvious that the entire ground floor had to be gutted. It started out as 'Could you help us with the monitor system?' and turned into our first major project in London.

It was pretty crazy. At one point we were in every phase of the project. In our weekly office meetings we usually discuss projects depending on what phase they're in. Some were in design, some were in construction document preparation, some were in supervision, and then there was The Church in its own meeting.

Were there any special considerations you had to address?

Paul's aesthetic seemed to line up with our aesthetic quite nicely. His idea is all white, but it's not quite all white. There's actually four different kinds of white in there believe it or not. He has this notion that the light and the mood can change. It's full circle because 45 years ago a left-handed guitar player gave me the exact same directions, 'I'd like my studio all white and I want the lights to change.' It's like déjà vu.

Tell me about your working relationship with Paul and Miloco Builds.

Paul's just sensational to work with. We got a lot of clients in 45 years and he's in the top 10 already, mainly because he's an artist himself. He deals with everything artistically, from choosing a light to making a note. It's fun actually. Miloco are great builders, terrific to work with. The project manager Micky Whelan and Pete Hofmann have been fantastic. I don't think two days go by that we don't talk to Micky or Pete. They've been sensational every step of the way. It's been pretty seamless to be honest, except for the warm beer when I go over there.

Are you confident that work will end in July?

I'm pretty sure, yeah. In our business you're always working two months ahead so now we just sit back and let them build it. It's definitely going to be summer 2014.

www.thechurchstudios.com
www.milocobuilds.com
www.wsdg.com

EVENT

Pro Sound Awards Expands for 2014

The Pro Sound Awards returns to the Ministry of Sound in London on 25 September with two new awards and an afternoon of panel discussions. Once again Sennheiser has signed up as headline sponsor, with Sony Europe supporting the Broadcast Audio category.

New for 2014 is the Best Theatre Sound category, which proved to be extremely popular, with a healthy number of suggestions logged as nominations closed at the end of May. In addition, the achievements of the sound-to-picture world will be recognised with the Best Sound (Post Production) accolade. In total 17 awards will be presented on the night.

Also new this year is The Pre-Roll – two hours of conversation and panel discussion with leading lights of the industry. This will segue gently into the welcome drinks and then on into the awards ceremony itself.

"Last year's inaugural event was excellent, with the informal awards ceremony, in particular, coming as a breath of fresh air," said Alan March, product management (professional) and head of spectrum affairs, UK at Sennheiser. "We are certain that this year's event will be equally successful, if not better still!"

Alan March, Sennheiser

Early bird tickets are currently available for the 25 September event for just £79+VAT. For more information contact sara.mather@intentmedia.co.uk

www.prosoundawards.com

RECORDING

Heard Around Town

Busy times continue at **Rockfield** as studio manager Lisa Ward reports: "There are a number of new releases out at the moment, all of which were recorded here over the past 12 months or so. The highest profile album is *Indie Cindy* by The Pixies recorded in the Quadrangle Studio during the Autumn of 2012 but only now available as an album having been released in a series of EPs. They're going to be supported on their US tour this summer by another of Rockfield's clients – Royal Blood, who also are figuring very highly with their own album release. This was recorded in the Coach House Studio with Tom Dalgety over the past 12 months in between their touring schedule.

"Twin Atlantic's album is also now out having been recorded by Gil Norton in the Quadrangle last summer. The Manic Street Preachers' last two album releases were both mixed here by Guy Massey as well... We have a number of Masterclasses booked in by colleges in the summer as well as some planned for smaller groups of individuals. There are studio bookings and enquiries on the board right up until Christmas too."

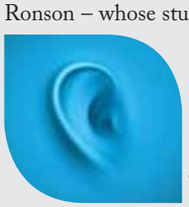
In rural Oxfordshire, recently refurbished **Woodworm Studios** has been hosting Fairport Convention. Stuart Jones reports: "They have started recording on a new album with engineer John Gale. They have booked in for rehearsals and recording sessions until January 2015 to fit around their touring and Cropredy festival commitments – where John Gale will again be at FOH. We have also had Dom Morley in mixing."

At **Dean Street Studios** in London's Soho, a major gear investment is in the pipeline. Watch this space. Meanwhile, over at **Redwood**, Andre Jacqueman is working feverishly on soundtracks for Monty Python's upcoming live shows at the 02 Arena.

La Chapelle Studios in Belgium's Ardennes has been hosting Stephen Malkmus & The Jicks from Portland, Oregon, recording their latest album, *Wig Out At Jagbags*. Also in have been The Spectors produced by Chris Urbanowicz (ex-Editors guitarist), recorded and mixed by Stijn Verdonckt. Gheppetto & The Whales have been working with producer Thom Monahan, while jazz pianist Jef Neve has been recording a solo album.

New Indian studio **A Square** has installed an Allen & Heath GLD digital mixing system. The studio is based around a GLD-80 mixer along with the GLD-AR2412 audio rack, set up to enable live jamming and studio recording on DAW, using the mixer's M-Dante card.

UK-based studio broker **mjQ** reports buoyant business with Hamish Jackson noting: "We are working with the leaseholders of new multi-studio complexes being developed in Soho, Shepherds Bush, Holloway, Farringdon and Hackney... As you know there are now over 70 recording studios built at Tileyard. mjQ introduced several big name artists including Basement Jaxx and Mark Ronson – whose studio we also equipped."



Want your studio news featured here? Send info on any recent projects or upgrades to *jory.mackay@intentmedia.co.uk*

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POST PRODUCTION

Penteo Demo Day at British Grove

At a recent event attended by a specially invited audience at Mark Knopfler's British Grove Studios, Bafta winning Nigel Heath of Hackenbacker showcased a demonstration of ADL's latest Penteo 4 Pro Surround Upmixer.

The demo included examples of uses of the upmixer from some top dramas, such as *Whitechapel*, through to music ranging from classical Decca tree recordings to Nine Inch Nails.

The event also included a session from Tom Allom, producer of rock bands Black Sabbath and Judas Priest, who showcased a live mix of a classic Judas Priest album through a vintage EMI TG 12345 console (that incidentally recorded McCartney's *Band On The Run*). Using the console and stereo pan pots, and into the Penteo plug-in, he created a 5.1 mix on the fly.

"It's simple, doesn't have bells and whistles you don't need, and I like it because there isn't much to say about it, apart from the fact that it sounds terrific, and its down-mix is identical to the original file, so total sonic integrity is always maintained," commented Heath. "For me, you are sitting with your head in the music and not in the DSP."

For a more in-depth look at the Penteo 4 Pro Surround Upmixer check out the review on page 42. **www.perfectsurround.com**

POST PRODUCTION

From the Cutting Room

Manchester-based **dock10** recently completed the end-to-end post production on the six part crime thriller *Happy Valley* from Bafta award-winning writer Sally Wainwright. Dock10's head of audio Mark Briscoe reported: "We decided to keep the ambience of the Valley (Hebden Bridge, West Yorkshire) as authentic as possible. So with this in mind Mark Ryder (sound editor for the series) went to the various locations for field recordings. The intention and goal was always to give the mix a 'real' edge. Yet we had free rein to go to town with the design of the flashback and retrospective scenes. This was done by drafting in the temp score music and working with the sound design so the two married."

At **Grand Central Recording Studios** (GCRS), sound designer Ben Leeves worked with WCRS, DCM, and Vizeum, on the BMW 'Wolf' cinema ad – the first to use Dolby's Atmos technology.

Kill the Messenger, the exclusive audio producer for the Ultimate Fighting Championship (UFC), has added an Avid S5 Fusion digital audio mixing console to its flagship Santa Monica facility. Kill The Messenger will use the S5 Fusion for long-form episodic mixes for UFC events, as well as for independent producers and mixers.

At **Prime Focus'** London facilities, the audio team has added new audio restoration technologies by combining iZotope RX3 with its Cedar Dialogue Noise Suppression and extensive collection of Waves Restoration plug-ins. The first test for the set-up came during the audio post on Leopard Films' new documentary series *BritCam*, which features footage and audio from body-worn cameras and CCTV.

Despite recent news about filing for Chapter 11 bankruptcy, **TODD-Soundeluxe** has kept busy this past month with supervising sound editors Andrew DeCristofaro and Becky Sullivan wrapping up the comedy *Tammy*, produced by Will Ferrell and Melissa McCarthy, who also stars. *Champs*, the boxing documentary by Mario Lopez, comes out on 1 July, and features David McMoyler as supervising sound editor with Mike Minkler mixing. In TV land, AMC's *Halt and Catch Fire* premiered on 1 June. Sue Cahill is the supervising sound editor, Keith Rogers and Scott Weber are the re-recording mixers. Curtis '50 Cent' Jackson's new Starz show *Power* premieres on 7 June. Mark Relyea is the supervising sound editor and David Raines and Marshall Garlington are re-recording mixers.

London's Bafta Craft-award winning **Lipsync Post** has added re-recording mixer Sven Taits (*Fantastic Mr Fox*, *United 93*, *Layer Cake*) to its sound team. Taits will work on feature film and television projects, starting with *The Dead Lands*, directed by Toa Fraser, a period action epic about murder and vengeance in a Maori tribe.

At **Jungle** Culum Simpson completed sound design on the new TV and online ad campaign for Peta while Jim Griffin mixed a Transport for London Young Drivers campaign. Jungle's music supervision arm **Native** also picked up a new project for Pets at Home.

The London branch of **Technicolor** recently completed the sound mix and full picture post for Channel 4's *Cardinal Burns*. The project brief was to create a cinematic feel for the sketch show, which features comedy circuit favourites Seb Cardinal and Dustin Demri-Burns. Jules Woods completed the sound mix on a Pro Tools HDX2 system with an Avid Icon control surface.

Want your audio post news featured here? Send any relevant stories to *jory.mackay@intentmedia.co.uk*

RECORDING

ITBW Talks Loudness

A special session on loudness compliance and the issues surrounding it is set to take place at the upcoming IT Broadcast Workflow conference at London's Bafta on 8 July, which is hosted by *Audio Media* sister title *TVBEurope*.

Taking part in a moderated discussion will be MC Patel, the CEO of Emotion Systems; Craig Russil-Roy from Adstream who will talk about the challenges advertisers face in distributing loudness-compliant content on a global scale; and Simon Leppington of Ericsson who will discuss file-based preparation and playout for broadcasters.

DPP, the Digital Production Partnership, represented by Channel 4's Kevin Burrows, will also be presenting a special forward-looking session at IT Broadcast Workflow, as well as contributing to the Loudness discussion. The DPP is an initiative formed by the UK's public service broadcasters to help producers maximise the potential of digital production.

IT Broadcast Workflow is a full day of case studies focusing on the ever-changing landscape of file-based workflows. The event also features a networking lunch as well as an expo zone in Bafta's David Lean Room. Tickets can be ordered at the ITBW website: **www.broadcastworkflow.com**

POST PRODUCTION

Point1Post Adds Atmos

Elstree-based post-production facility Point1Post has just revealed its new Dolby Atmos stage. The upgraded stage now features 45 JBL speakers including five channels (four-way) behind the screen, 14 speakers in the ceiling, 20 surround speakers on the walls, two bass management subs for the surrounds, and four subs at the front with Crown amplifiers and DBX 4800 DriveRack crossovers being used for the screen channels and subs. The stage has also been equipped with a Dolby RMU (rendering and mastering unit) for Atmos mixing and a CP850 for playing back Atmos mixes from the facilities DCP server.

Point1Post was founded by re-recording mixers Graham Daniel and Adam Daniel in 2005 and since then has provided services to more than 60 productions.
www.point1post.co.uk

INSTALLATION

Focusrite Powers the Sound of Kings

A sound art installation designed to represent the regeneration of Kings Cross using submitted field recordings was tested at Red Bull Studios, powered by Focusrite RedNet, and recently made its debut in London. Jory MacKay chats to NUIK collective members Benji Fox and Alastair McNeill Brown about the Sound of Kings project.

Tell me a bit about the background of the project. How did the idea come about?
Each of the members of NUIK collective have varying careers. I recall talking about wanting to do more multichannel speaker installations when the venue approached us to develop an idea for Kings Cross.

How was the response from the public? Did you get a good amount of field recordings?
We didn't have any budget at all so we were very nervous about getting submissions, but word started to float around and we had an incredible response from the general public (on their phones), local documenters, enthusiasts, and professionals.

Were there any submitted recordings that were strange or that stood out?
There was quite a range of different stuff, including traffic, trains, and people. There were some phone recordings that were really interesting due to either the quality of the hardware microphones or some weird software compression.

What was the mix process like and where did it take place?
We set up the speakers and amps that we had collected at the London Red Bull Studios. This was the first time that we used the Focusrite RedNet 2 Ethernet audio interface too. We had no idea whether a load of old hi-fi equipment would create the effect we had imagined.
There was quite a bit of calibration and we had composed some small compositions over 16 tracks to test the system. After the first play through we were all smiling and after creating some panning systems in Ableton Live to be able to pan over 16 channels we discovered that a single sound moving around the speakers was really quite special.

It was also apparent how good the RedNet 2 system sounded, when you're dealing with such an array of random equipment it was really important that the central source was of a high quality.

Last, what's next for the NUIK collective?
We are currently designing a collaborative installation to premiere at this years Green Man festival as well as developing a few exciting online things, so keep an eye on our website!
www.nuik.co.uk
www.focusrite.com

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Leaving for Las Vegas

infoComm14

WHAT?
InfoComm 2014

WHERE?
Las Vegas Convention Center, Last Vegas, Nevada, USA

WHEN?
14-20 June (Conference), 18-20 June (Exhibition)

The largest pro-audio show in North America is set to open its doors with another packed schedule.

More than 250 leading exhibitors of all facets of audio technology solutions for both live events and fixed installations are preparing for the largest pro-audio event in North America. InfoComm 2014, which runs from 14-20 June in Las Vegas, offers a mix of education, technical tours, and seminars, as well as an Audio Pavilion highlighting the latest developments across the industry.

Before the showfloor even opens, intensive InfoComm University training courses will get underway. New for 2014 is a three-day course entitled 'All About Audio'. Gordon Moore will take participants through the fundamentals of audio, including introductory elements of acoustics and sound behaviour, advice on how to set gain structure and equalise an audio system, and troubleshooting common audio issues with a live sound demo.

The following day, attendees will be able to 'Ask the Audio Experts'. Tom Kehr, Pat Brown, Mario Maltese, Ray Rayburn, John Murray, Steve Macatee, and Ethan Miller will be on hand to offer advice on the trickiest aspects of audio system design in an interactive session covering real-world examples and Q&As.

Other highlights of the seminar programme include an 'Introduction to Live Audio' on the morning of 18 June, 'Audio Processing Fundamentals' at 10:30am on 19 June, and 'Advanced Acoustics' at 2:30pm on the same day.

Visitors to InfoComm will also be able to take a trip behind the scenes at some of the biggest venues in Vegas. From The Cosmopolitan hotel to the Blue Man Group productions; tours will run throughout the three days of the exhibition.

A highlight for *Audio Media* readers is set to be a tour of the Studio at the Palms and the Pearl Theater on the morning of 18 June. This multi-million dollar recording studio located at the Palms Casino Resort has hosted legends in the music industry from 50 Cent to Queen to John Fogerty and more. Explore the equipment that makes the music magic, like the control room fitted with LCD metering, Total Recall automation, and motorised faders.

In addition, a host of manufacturers, including Biamp, Community Professional, Sennheiser, and Williams Sound will be holding training sessions.

Lastly, keep your eyes out on the showfloor for *Audio Media* sister titles presenting their first Best of InfoComm Awards. *Pro Sound News*, *Pro Audio Review*, *Sound and Video Contractor* and more have teamed up to recognise outstanding new products. ■

www.infocommshow.org

Heading East

Back for its 19th year is BroadcastAsia, the region's leading exhibition and conference for the broadcast and entertainment industry.

Taking over the Marina Bay Sands in Singapore this month is the BroadcastAsia exhibition and conference. Last year's exhibition saw nearly 17,000 attendees take in the latest technologies and releases from 716 exhibitors across the broadcast, film, pro-audio, and live event industries, making it the largest show of its kind in the area.

For the broadcast audio specialist, this year's exhibit also features an area for international professional audio technology companies.

Console manufacturer Calrec will be showcasing its recently rebranded Summa audio console at the show, while RTW will be on hand to exhibit its new RTW Loudness Tools from the Masterclass Plugins range, among other software and hardware products.

Riedel will also be at the show with Joe Tan, general manager, south-east Asia commenting: "Riedel is once again happy to be a part of the premier broadcast trade show in south-east Asia and BroadcastAsia comes at an exciting time for us. Our new MediorNet update and the MetroN core router take our philosophy of totally networked solutions to the next level and we are thrilled to be able to show them in Singapore."

A number of conferences will run alongside the exhibition including the CommunicAsia 2014 Summit, the BroadcastAsia 2014 International Conference, and the Creative Content Production Conference 2014, which looks at the latest disruptive technologies that are helping companies gain awareness and success in Asia. ■

www.broadcast-asia.com

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WHEN?
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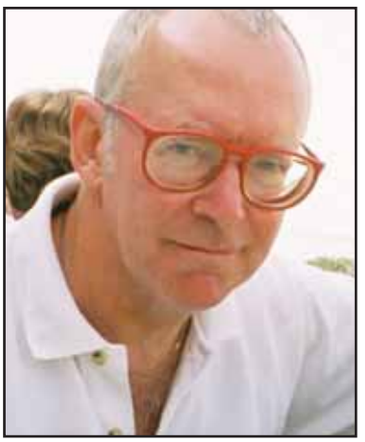
The Art of the Matter

Consulting editor Jim Evans catches up with goings on at the Royal Albert Hall and The Roundhouse, as well as keeping track of the BBC's latest jaunts.



Who's Who At The Royal Albert Hall

The demise of the vinyl album and CD and the advent of the download scenario has been well chronicled. But there are elements that I and many others miss – notably album sleeve artwork and liner notes. We like to know where tracks were recorded and who was at the controls, and the artwork and photography are integral parts of the album package. Check out the work of Hipgnosis and the late Storm Thorgerson, the wonderful Stiff Records sleeves of the 80s and the photography of Mick Rock.

Let's hear it then, for Sir Peter Blake, who designed the artwork for probably the best-known sleeve in history, the Beatles' 1967 album, *Sgt Pepper's Lonely Hearts Club Band*. The 81-year-old artist has unveiled a multi-panel artwork at the Royal Albert Hall, entitled Appearing at the Royal Albert Hall. The mural, which is 10ft high, features more than 400 figures from the worlds of music, sport, science, and the arts who have appeared at the London venue from its opening in 1871 through to the present day.

The list of those included is diverse – where else would you see Albert Einstein and Victoria Beckham together? – and reads like a 'Who's Who' of the past 143 years: Sir Winston Churchill, Sir Edward Elgar, Samuel Coleridge-Taylor, Fred Astaire, Dame Shirley Bassey, Johnny Cash, Jimmi Hendrix, and Tim Henman all feature. The mural also celebrates some of the more unusual names to have graced this famous stage, including Lord Baden-Powell, Big Daddy, and a Dalek.

Speaking at the launch, Sir Peter said: "I was honoured when the Royal Albert Hall commissioned me to create this mural. The project instantly captured my imagination – the ultimate opportunity to promote the arts in one of Britain's greatest venues, combined with the challenging process of immortalising over 400 of the world's most popular artists." Catch it if you can.

Teenage Cancer Trust

Among those in Sir Peter's montage is The Who frontman Roger Daltrey who has won a major music industry prize for his work with the Teenage Cancer Trust. The singer has organised the charity's annual concerts at the RAH, booking artists like Arctic Monkeys, Tinie Tempah, and Paul Weller. Presenting the outstanding contribution prize at the *Music Week* Awards in April, Weller praised Daltrey's "tireless, fantastic work" for a "very worthwhile charity".

Daltrey, who is a patron of the trust, used his speech to thank the musicians and comedians who had taken part in his fundraising shows. "I didn't do this, I just got the idea," he said. "The music business, the comedy industry, you're the ones that have made it happen. Keep it going, we do great work. We lead the world in music, and now we lead the world in the way teenagers are treated with cancer."

Royal Record

Still in South Kensington, it's looking good on the financial front. The Royal Albert Hall enjoyed a bumper year in 2013, posting record audience numbers of 1.71 million and operating income of £18.6 million, up 10.4% on the previous year. The figures represent the most successful year of trading in the venue's history with 390 events driving a 7% increase in audiences. The venue recorded its highest ever operating surplus of £5.3 million. The Hall's own promotions – which included performances of *Carmen*, *Swan Lake*, and live orchestral accompaniment to films including *Fantasia* and *Singin' in the Rain* – generated £600,000 more in ticket sales than in 2012.

In The Round

Across London, The Roundhouse has announced a new summer arts festival, which will include a first performance of Imogen Heap's album *Sparks*. The festival will also include a world premiere of the score from Oscar-winning film *There Will Be Blood* by Radiohead's Jonny Greenwood who will play alongside the London Contemporary Orchestra. Sinéad O'Connor will also perform for the Roundhouse Summer Sessions, running from 24 July to 24 August.

Technical Theatre Awards

The Technical Theatre Awards, which celebrates the outstanding achievements of people working behind the scenes, has launched its 2014 'bigger, better, brighter' event with a call for sponsors and nominations. The TTAs debuted at PLASA 2013 at London's ExCeL to credit the often unsung heroes working backstage to make theatre magic happen.

"The idea of the TTA awards is to highlight the work and effort of the people behind the scenes who are so often overlooked," says TTA co-creator Ian Taylor. The Technical Theatre Awards ceremony will be on Monday, 6 October.

Travel News

The BBC Gravy Train steamed into Copenhagen for the Eurovision Song Contest jamboree with a full passenger list of presenters, producers, and hangers-on in the buffet car – plus news of a vacancy in the driver's cab. Sir Christopher Patten has stood down for health reasons as chairman of the BBC Trust. We wish him a speedy recovery, but let's hope his successor has the bottle to tackle the culture of mega-pay deals, jobs for the boys, and excessive staffing. Mind The Doors! ■

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Facing Uncertainty

POPULATION: 10.5 MILLION

While the eurozone crisis has damaged most of the media industries in Portugal, the market for recording studios and live music continues to grow – but for how long?

The history of the people of the Iberian Peninsula has been one of expansion and global influence. Even now, the legacy of Portugal's reign as a colonial superpower can be seen in the 250 million Portuguese speakers found around the world today (making it the sixth most spoken first language).

While it may have lost its starred global status as of late, the pro-audio industry in Portugal continues to expand within the country's borders with industry professionals saying the market for studios continues to grow.

The live sector has also experienced exponential growth with the number of music festivals rising each year including the internationally renowned Optimus Alive, Primavera Sound Porto, and Rock in Rio Lisboa, among others.

Yet while the live and recording industries have seen a boom in the past decade, the Portuguese film industry has struggled due to a lack of subsidies and government support. A new film act passed, but not yet enforced, in Portugal allowed for state financing body Institute for Cinema and Audiovisual (ICA) to obtain funding through payments from five pay TV operators. Yet the operators have flat-out refused to pay the required €3.5 per subscriber, calling the required payments unconstitutional and demanding a say in what projects are being financed with their funds.

"In 2013 Portuguese cinema lives in an impasse situation with the constant postponement of funding and a lack of compliance with the legislative framework by various parties," commented Mario Micaelo of the Agência da Curta Metragem and Curtas Vila do Conde Film Festival in a speech titled Portuguese Cinema: One Year After Zero given during the opening of the Bucharest International Experimental Film Festival last November.

Earlier this year, the Portuguese government approved an amendment to the current film law that reduced the €3.5 to €1.75 per subscription.

Pandora da Cunha Telles, president of the Association of Film and Audiovisual Producers (APCA), has declared to the LUSA news agency that the amendments are "a short-term compromise" and that "in moral terms, it represents a backspace. It solves a treasury issue but, morally, for the country, it is not a good omen: changing a law because you can't enforce it!"

A major fall in attendance hasn't helped the situation either. According to the European Audiovisual Observatory average movie theatre attendance in Portugal dropped 12.3% last year with the decrease attributed to the recession and a lack of local products.

Festival Culture

The people behind Talkfest, the only forum in Portugal dedicated exclusively to music festivals, run us through the recent changes to the Portuguese music festival scene.

How has the market for live music and festivals in Portugal changed in the past five years? What could potentially be attributed to that change?

The music festival industry has had many changes during the last few years with the main change being the increased number of festivals. For a small country like Portugal, having around 120 festivals in 2013 can obviously be good for one side (a lot of events to choose and to go to) and a difficulty for the industry that has to fight for the audience. Another change that is getting dangerous when you have a lot of music festivals on offer is the [economic] crisis. The crisis affects many aspects of the industry from the audience that doesn't have the money to go to festivals to the sponsors that can't afford to sponsor the events. Government financial support for the promoters has also decreased and music festival management are struggling to make their events happen.

Overall, I would say that the industry in Portugal is, at the moment, at its maturity and for the next few years there will be a natural selection of events and only the ones that offer a good headliner or have a special and different concept will survive.

Do music festivals in Portugal support local artists as well as larger international acts?

Music festivals in Portugal are starting to promote local artists, not just because they have a smaller budget to organise the event but also because music in Portugal is developing and it is getting really strong. Usually there are always Portuguese artists even if most of the time they open the festival programmes.

Actually, in the last few years a number of promoters started to organise specific festivals for Portuguese music and they are having interesting results.

International acts are the main reason for festivalgoers to choose to go to one or another festival. At the Talkfest 2013 survey about the Portuguese festivalgoers profile, 48% of the audience declared that they decided to go to a festival having in mind the acts of the event and the headliners.

Lastly, how important is sound quality for both the audience and the bands/promoters?

In general sound is very important for both the audience and the bands. At the moment in Portugal most people go to festivals because of the music and to have that experience in the best conditions. In the Talkfest 2013 survey 31% of those enquired pointed out sound quality and other logistics as relevant at their favourite festival.

www.talkfest.eu

Word on the Street

O Ganho do Som owner João Ganho

When you start looking at the recording, post, and broadcast industries in Portugal one name seems to crop up over and over: Marcelo Tavares. The man behind the Audio Designer studio and acoustic design firm has put his stamp on facilities ranging from Al Jazeera's TV complex in Paris to O Ganho do Som in Lisbon – the last of which is owned by self-professed audiophile João Ganho.

A 20-year veteran of the Portuguese broadcast industry, Ganho opened the studio in 2006, basing it on his own high-end equipment including five Electrocompaniet Nemo amplifiers and five B&W 801D monitors.

We talk to the duo about the current state of the industry in Portugal.

How healthy is the market for recording studios in Portugal?

Marcelo Tavares: I've been involved in projects for medium and even large studios, although people are more selective in their investments as revenue is not taken for granted in the short term. A lot of people are trying to strive through the crisis and hoping for better times.

João Ganho: Portugal has never had so many recording artists as nowadays. Everyone is recording, from fado [traditional Portuguese music] to hip-hop. It looks like a paradise for studio owners but the truth is that budgets are very low for most artists and most of them have a non-professional status.

Has the market changed in the past 5-10 years?

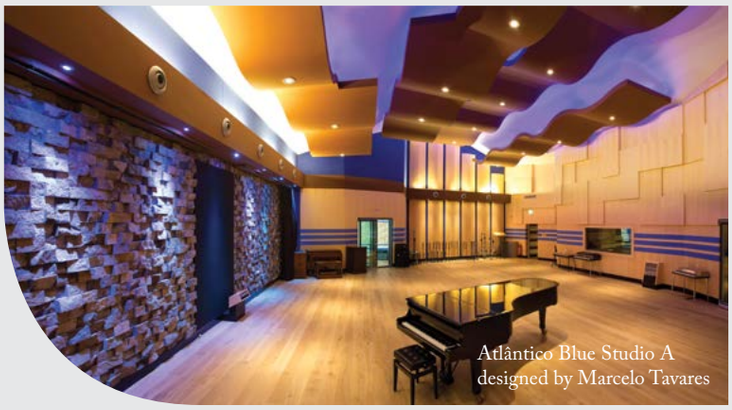
MT: Yes, in a way. A few years ago, only big companies or wealthy individuals could afford to build top facilities with high-end gear and proper acoustic spaces. With the affordability of certain key technology items, a lot of people are now more focused and aware of the importance of proper acoustics, as in a way that is what can differentiate them from the competition.

JG: In 2006, when O Ganho do Som opened its doors, there was just one good and big recording studio in Portugal. Lisbon's bigger studio then was an obsolete facility from the 70s and there were no high-quality studios in the capital. Small project studios and inexpensive TV post studios were the standard. There was not even a single true mastering suite with the kind of reference monitoring and acoustics we have at O Ganho do Som.

Do you see more demand for personal studios over larger commercial spaces?

MT: There aren't many large commercial spaces here and it is a fact that there is more growth in personal studios. However, that depends on the type of personal studio we're talking about. Some people are keen to invest in acoustics and proper monitoring, some don't have the budget or don't care.

I've done more high-end home theatres and personal hi-fi rooms than personal recording studios.



Atlântico Blue Studio A designed by Marcelo Tavares

JG: During the past six years there has been an increment of small studios and small TV post studios. Although we have [been in] a financial crisis for several years in Portugal, many small studios were built and the older ones were updated mainly in their acoustics.

I think there are an excessive number of studios nowadays for such a small market and, sooner or later we will start to see most of them closing doors.

What about audio post-production facilities? Is there much demand for new facilities?

MT: Not a significant growth. It's a stable market. I've projected a few in the last years, but most are integrated in TV facilities. The rest are independent facilities that work for the broadcasters and advertising markets.

JG: If you ask the common audiences what they know about Portuguese films, the first thing they will relate them to is bad sound. Unintelligible dialogue is the most obvious for them because they can't follow the story. From an informed point of view, one can easily find that is the result of successive mistakes, which start during the recording of the production track and end in the final mix.

Where have you seen the most growth in the past 5-10 years?

MT: Without any doubt I would say on the broadcast side. The growth has been driven by the lowering costs in technology, production, and distribution models. I've seen an exponential demand for small-scale television stations and associated studio infrastructures.

JG: TV sound post in Portugal is much more professional and industrial than cinema post. It may have serious limitations from the creative point of view but it is a very efficient assembly line that gives any sound professional a high standard to start a career.

Lastly, do you have any predictions for the future of the industry in Portugal?

MT: Well, it's a difficult question. It's unpredictable. It all depends on the way that the industry adapts to the increasing difficulties posed by the economic situation. I think it's a global or, if you want, a European issue. Portugal is a small country, but it has a lot of potential for growth and I am sure it will win over the difficulties.

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Worlds Apart

Football World Cups are often the venue for technological advances and Brazil 2014 will be no different, especially when it comes to the broadcast audio. Will Strauss reports.

Twelve plug-and-play equipment rooms have been built for Brazil

While World Cups can vary wildly in terms of on-the-field sporting competition, there is one constant: host broadcasters and rights holders alike try to push the technical boundaries when it comes to TV and radio coverage.

Every four years sees a new advance or three. Some resonate more than others. Four years ago it was all about 3D. This year three matches will be acquired and broadcast in 4K.

While it might not grab the headlines that the 4K pictures will, a lot of effort has also been put into enhancing the audio for the tournament.

"You cannot reinvent sound but we are putting a lot of emphasis on consistency, which is the biggest issue in audio," says Christian Gobbel, senior engineering manager at HBS, the host broadcaster for Brazil 2014.

"At the last World Cup [in South Africa] for example we were lacking the tools to measure loudness properly but now with the EBU R128 recommendation we are closer [to achieving that consistency]."

To deal with the loudness issue, Quality Control based at the IBC will guide the audio engineers at the venues through the mixing process while additional training will be given so that the "audio guys can read the meters properly and use their ears properly".

"In our experience the TV viewer is often a better sound engineer in terms of loudness than the guys in the studio," adds Gobbel. "They definitely know when it is too loud or not loud enough."

As part of its host broadcast service, HBS will make available a number of key elements and mixes for rights holders including the TVIS, RIS, and MCIS (see box, below left) plus English commentary and Closeball FX.

5.1 surround sound will be provided for unilateral use at the venues. Within this, 16-channel embedders will allow it to be made available un-encoded.

"At an event like this, where viewers want to feel like they are actually in the stadium, we put a big effort into things like the surround programme," says Gobbel.

The main mixes from HBS

TVIS (Stereo)

The TVIS (Television International Soundtrack) will be a broadcast-quality stereo television sound mix to accompany each match. It will be a mixture of at least 12 pitch microphones (including ball sounds) and atmosphere microphones that will aim to provide "exciting and immediate coverage of the game and crowd reactions". It will also be mono compatible. For the majority of broadcasters, those that want to simply add their own commentary and presentation to each game, this will be the feed of choice.

RIS (Stereo)

The RIS (Radio International Soundtrack) is a broadcast-quality stereo radio sound mix that will accompany each match. It will consist of a mixture of stadium atmosphere microphones and will aim to provide coverage of the crowd reactions, anthems, and stadium sound suitable for live radio transmission rather than reflecting the camera shots. It will also be mono compatible.

MCIS

The MCIS (Multi-Channel International Soundtrack) is a broadcast-quality 5.1 television sound mix that will be produced to accompany the coverage of each match. The MCIS will be made up of at least 12 pitch microphones providing ball sounds, atmosphere microphones including special surround microphone arrays and ORTF stereo sources. The MCIS sound mix will provide much of the same as the TVIS but with the "added enhancement and involvement that multichannel audio brings to the coverage alongside HD pictures".

A Dolby E encoded multichannel audio mix will be available at the IBC and at each venue. The Dolby E stream will also contain an English guide commentary.

The ERCs

A key component of the HBS production set-up will be the ERCs (Equipment Room Containers). First trialed during the Confederations Cup in Brazil last year, these 'plug and play' innovations will replace the Equipment Rooms that have previously been used to produce World Cup coverage.

Referred to as the "beating heart of onsite broadcast operations" the Equipment Rooms connected to all operational rooms. In 2010 in South Africa they were assembled, tested, and troubleshot onsite. The process is said to have worked very smoothly, but took a long time. Using ERCs instead will improve that situation.

What are they? The ERCs are remotely controlled freestanding units that feature all the electronics, main cores, and base units as well as thousands of cables (including coax, Ethernet and audio). Having been pre-built and pre-tested in Munich by systems integrator sonoVTS they have now been shipped to Brazil where the cables will simply be unrolled and 'plugged in' to the equipment in the various operational rooms. From that point, the venue is essentially active. Twelve ERCs have been built for Brazil 2014.

"The ERCs are essentially very, very big OB vans without wheels or work spaces, built to our exact specifications," says Gobbel. "The great thing is being able to test the equipment and the interfacing between all the components well ahead of the event, it's a huge step forward for us and a great relief in the busy days before the opening match."

"This is not done in the basic simulcast mix. We are doing the surround mix at the IBC because we think that within such a big production like this the sound guy in the venue cannot be expected to successfully do the stereo mix and all the packages AND a surround mix at the same time."

Additional audio content will also be made available via the ISO feeds. This includes outside ambience, aerial ambience, and a microphone on the CableCam.

To further ensure consistency of coverage across the entire tournament, each venue will have an identical audio set-up [see box out, right] with the same mics and desks.

Dan Miodownik, director of production services at HBS, says: "We've been quite specific about what we want to achieve [this year], with single microphone choices through Sennheiser and Schoeps. We have 12 audio desks, all Lawo, however they will be configured and set up in the way in which each audio engineer wants to work."

To help cope with the huge number of commentary positions a fully IP-based commentary system is being used for the first time. Developed by Lawo and HBS the LCU (Lawo Commentary Unit) will connect all the venues and the IBC in Rio via a multitude of 10 Gbps paths.

"We always try to do new things and audio via IP is one of the big technology breakthroughs in the last year," says Gobbel. "At the IBC we will have the first ever IP-based distribution [Ravenna/AES47] of audio feeds to rights holders at an event of this scale."

Of the 840 commentary units that will be used, 240 will be IP-based LCUs.

At the same time a single comms system for the venues, provided by Riedel, will allow the crew to talk to each other "at whatever time they need to do so for the entire period of the event".

"50 percent of the enjoyment of a football match comes from the audio," concludes Gobbel. "That is why we are putting a lot of effort into all the little bits and pieces." ■

www.hbs.tv

The Match set up

- 20 microphones covering action on the pitch
- 8 stereo microphones on cameras
- 10 stereo and surround microphones for audience capturing
- 10 interview microphones at various locations
- A main audio desk with 140 input channels (microphones, replay machines, music, anthems)
- A multi-feeds audio desk with 80 input channels (interview and stadium microphones, pre-mixes, music, anthems, press conference, and translations)

A Ribbon Revolution
...the rules have changed

Steve Levine

There's a revolution underway in recording studios and on live stages stretching far and wide across the UK and beyond.

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Invisible Sound

David Sturzaker as Abelard with Jo Herbert as Heloise

Jory MacKay talks to the sound crew behind the latest production from English Touring Theatre, which has been bringing the sound of Shakespeare's Globe to theatres across the UK.

If the motto of a good theatre sound designer is to be heard and not seen then sound designer Derrick Zieba and sound engineer/tour technician Rob Jones might as well be invisible.

The duo's latest effort for the English Touring Theatre and Shakespeare's Globe co-production of Howard Brenton's *Eternal Love* (previously titled *In Extremis*) brought the look, feel, and sound of Shakespeare's Globe to venues around the UK during an eight-week tour.

While the stage design is immediately recognisable as Globe inspired with entrances on either side; a central curtained inner stage; and a balcony housing the play's musicians, it left Zieba with the task of figuring out how to naturally and authentically translate the sound of an unamplified performance at the Globe to more modern, 1,000-person+ playhouses.

"My brief was that they wanted to reproduce what they had at the Globe, but not just in small theatres, [but also] in big theatres – much, much bigger spaces," explains Zieba, who has spent his career fluidly moving between the worlds of theatre, rock 'n' roll, and large productions such as the Brit Awards and MTV Awards, among others.

Zieba's work on another of Howard Brenton's plays, *Anne Boleyn*, would lay the groundwork and act as proof of concept for their approach to the sound of *Eternal Love*.

"*Anne Boleyn*'s brief from John [Dove, director] was that he didn't want to see any microphones, and the brief from Bill [William Lyons, composer and musical director] was that he wanted it to be as natural as possible, but that the natural sound was lifted in those bigger venues so it didn't sound too quiet."

A DPA 4099V clip with a 4061 microphone on the vielle

Eternal Love follows the love story of controversial 12th century philosopher Abelard (played by David Sturzaker) and his 16-year-old student Heloise (Jo Herbert). With Abelard already on thin ice with the church over his theological arguments, the uncovering of the lovers' affair (prompted by Heloise bearing a child out of wedlock) puts him at odds with Heloise's uncle and de facto father Fulbert (Edward Peel).

The play's plot follows the tragic story of the two intellectual lovers attempting to live free from the control of the church with the rich modern dialogue supported by period-specific music from William Lyons, Rebecca Austen-Brown, and Arngeir Hauksson.

Taking it on the Road

"We tour everything. We're completely self sufficient," explains Jones during the show's run at the Theatre Royal Brighton. "To keep everything as natural as possible there's no [proscenium] PA. I asked them to take it down just so we get a cleaner visual."

Clean and natural are at the core of the production's sound design. Tucked away behind the flats stage left and right and invisible from the audience are loudspeakers from d&b – one Q7 per-side (expandable to two for bigger venues), complemented by a Q_sub.

"Just to make it really difficult for myself I didn't want any speakers showing on the front so all the amplification is done from behind the flats," explains Zieba. "So literally we've had to EQ the Q7s in order that once it goes through the flat it's naturalistic, but it does mean as far as the audience are concerned they get a very naturalistic focus on the music."

Maintaining the 'invisible sound' aspect, the actors are unmic'ed except for three Shure SM91 float mics across the top of the stage for some of the singing moments and to give a bit of foldback up to the band.

"This is where my background in theatre comes in as most rock 'n' roll guys would never think to try to amplify the cast members in front of the loudspeakers, but from experience, I knew I could make it work," adds Zieba.

At FOH, Jones runs a 32-channel Yamaha M7 taking in 16 inputs from the stage and band, and outputting 10 channels, including additional recorded instruments for the shows finale jig (a Globe tradition). While the kit is quite simple in theory, the mix of the show is a bit unconventional.

"In principal, I mix the show

differently to how I would normally mix a show," explains Jones. "Typically doing any other show be it theatre, rock 'n' roll, or whatever, you're creating a sound that you want to hear – or the people with the money want to hear. What I try to do on this show, because we're trying to be as natural as possible, is I don't mix the sound I want to, I mix the sound I believe. I quite often find myself looking at the band and asking 'do I believe that's natural'? And if not I can adjust it.

"For example, I'm not putting a lead instrument miles on top because that's unnatural [sounding]. I'm sitting it slightly down from that so it's still leading but it's still very believable."

The DPA Factor

The three-person musical group plays more than 10 instruments throughout the play including period-accurate woodwinds (including recorders, flutes, and a duduk), a hand drum and bell tree, as well as a lute, gittern, psaltery harp, and vielle ("a sort of five-string violin", says Jones).

"In terms of how we're mic'ing it, we're going as subtle as possible," explains Jones. "Derrick managed to use mics in ways they're not really designed to be used. It's innovative and creates a great sound."

"My first though was to use DPAs," says Zieba, who, following the success of the touring run of *Anne Boleyn*, set about finding ways to use the Danish microphones on the show's eclectic array of obscure and fragile medieval instruments.

The uses range from simple applications such as a DPA d:vote 4099G clipped to the side of the psaltery harp, or the woodwinds being mic'ed by 4060s clipped to the players (a trick Zieba borrowed from a saxophone quartet he saw years ago), to the more inventive.

"On the bells, for example, we've just taped a DPA 4061 on either side hard up against the flat, which does sort of create a PZM effect, which is quite nice," explains Jones. "Between the pair of them it creates a really nice mix and we've got a little bit of panning just to open it up a bit."

For the vielle, with its thin gut strings, a normal 4099V and clip kept sliding around. Zieba explains his workaround: "I'm using a 4099V clip with a 4061, and that works beautifully because it's within two centimeters of the f-hole and it produces a really natural sound."

Another instrument that took some additional thought was Arngeir's lute with its curved back. Zieba: "It was more worrying to me, but we got a tip from a musician before we arrived that we could possibly use a 4099 violin clip with the addition of Blu-tack… well we're using 'white' tack."

Lastly, there is the hand drum. Zieba: "We were thinking of ways of mic'ing that drum and we thought initially about wearing the mic, but that was in the way, so we created our own PZM with a DPA 4061 taped to the side of the organ."

"The idea is to keep it as discreet as possible, and from the first visual impact, not to be aware that there are any mics. The 4099s are obvious when you know what you're looking for, the 4061s certainly aren't, and the naturalistic sound is such that you aren't really looking for mics.

"I could have created the same sound with Schoeps and Neumanns, but there would have been these big things sitting there. I think you just have to think a bit outside the box."

"I'm incredibly happy with the way the show turned out," expresses Zieba after the final run of dates. "Looking back on it now I can't think of any way I would have changed it." ■

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Sound engineer and tour technician Rob Jones

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From Chekhov to the CHOCOLATE FACTORY

As Charlie and The Chocolate factory continues to break box office records at London's Drury Lane Theatre, the show's multi-award winning sound designer Paul Arditti talks with Jim Evans about his craft and his approach to this highly skilled chosen profession.

Award-winning sound designer Paul Arditti. Picture: Nik Dudley

Many of the older theatres you work in must be acoustically challenging – how do you overcome the various problems you encounter?

Funnily enough, the older London theatres tend to have great acoustics. Sprague and Matcham really knew what they were doing 100 years ago. The biggest problems are often associated with more recent theatre architecture: flat, hard, parallel surfaces and reflective, gentle, modernist curves.

I think it's very important that sound designers consider the acoustic treatment of auditoria as part of their brief. It's quite possible to improve the sound of a room without spending a lot of money, particularly for long runs or 'sit-downs' where there is time to analyse and fix things.

For example, before we mounted *Billy Elliot* in Australia in 2007, we commissioned Arup Acoustics to help identify a long-standing acoustic problem in the circle of the huge Capitol Theatre in Sydney. Using Arup's data, we were able to design six large acoustic panels, which we hung from the auditorium ceiling. The panels absorbed the energy from a long acoustic reflection between the stage and the auditorium, which was being propagated and actually amplified by the smooth, concave, plaster ceiling. The result was that vocal clarity – both amplified and acoustic – was much improved.

Mixing consoles – which do you favour and why?

The flexibility, physical size, channel count, programmability, audio quality, plug-ins, and reliability of digital consoles are difficult to argue with. I prefer DiGiCo to Yamaha for bigger shows, as they are arguably more customisable for use with musicals, but I'm happy mixing on Yamaha kit too.

How do you decide which loudspeaker systems to use?

With sound systems that I am able to specify myself – usually rented, for commercial productions – I rarely stray from speakers made by Meyer, d&b, L-Acoustics, and maybe EM Acoustics. It's important to be able to predict how your chosen speaker is likely to work in a new show and place, and that means having experience of how this speaker has performed in several previous installations.

Here's another issue worth considering when choosing loudspeakers: whether it's better to go powered or unpowered. Powered speakers may be better if there would otherwise be a very long cable run between amp and speaker. Unpowered speakers may be better if invisible cable runs are required, or if one amp channel is to power several speakers, or if there is a weight restriction.

To what extent do you rely on in-house systems?

West End theatres and Broadway theatres have no in-house equipment or infrastructure so everything is brought in for the show.

Shows in subsidised producing theatres like the National Theatre, the Royal Shakespeare Company, the Young Vic, and the Almeida, need to be designed around existing equipment lists and infrastructure.

Thankfully, most theatres whose staff are used to working with freelance sound designers allow us a certain amount of leeway to move speakers around. It's very rare that we are stuck with a system we can't customise.

How have developments in microphone technology affected your approach to sound design?

The changes to sub-miniature mics, as used with radio systems, have been evolutionary rather than revolutionary over the past 10 years. For most musicals we are still striving for 'invisible amplification'. Essentially we look for the smallest, most resilient, highest sound quality, omnidirectional mic we can buy, and then leave it to the brilliance of our sound number two to camouflage and position the mic on the actor's head or body.

Do wireless systems give you much more scope?

Theatre musicals rely massively on wireless technology. Luckily, the biggest improvement over the past decade has been in the reliability of radio kit. As directors' expectations rise, we find we need more radio mics, more in-ear monitors, more wireless loudspeakers, more communications channels, and more remote switching. We are on a continual search for more radio bandwidth.

> **"For most musicals we are still striving for 'invisible amplification'." Paul Arditti**

Recent digital radio mic systems, like the Sennheiser 9000 series, have offered a simultaneous step forward and backwards. We can squeeze more channels into our available radio bandwidth, and the audio signal is less compressed, but digital pack sizes are far bigger, run far hotter, and introduce a very unwelcome extra few milliseconds of latency.

Which have been your most problematical productions to work on?

Charlie and The Chocolate Factory, because of the simultaneous combination of fast and complicated lyrics, full musical arrangements, child actors, and athletic choreography!

Really, there is only one rule for sound design in musicals, and it is to hear the words. I have learnt that sometimes, however well designed the sound system and however brilliant the sound mixer, it is impossible to make every word comprehensible. Audible, yes – comprehensible, no.

And which are you most proud of?

The two shows I am most proud of are *Festen* and *Billy Elliot*.

Festen was acted out on a plain black set with minimal props and furniture. Director Rufus Norris encouraged me to work with just a few ingredients – a child's laughter, running water, the sounds made by wine glasses. The world we conjured up with this basic vocabulary was perfectly synthesised with the acting, lighting, costume, and set. All the physical elements became one. I was so proud of the teamwork.

Billy Elliot is a dance musical with the sensibility of a political play. It's gritty and real but it's also uplifting and touching. It's nearly 10 years old, and I must have seen it well over 200 times, in various theatres around the world. I saw it last week in London and it still amazes me how good it is.

Which kind of productions do you prefer working on – serious drama (Chekhov, Shakespeare, etc) or big time musicals?

I don't mind, as long as the show has something new to offer an audience. And I need to be kept out of my comfort zone. It's never been about technical stuff with me – I did a drama and English degree – it's about the emotion.

How does your approach to the different genres vary?

My definition of sound design for a play is a dialogue with the director. The director's vision is paramount, and whatever you make as a creative person needs to work with that. It's important that you understand what the director is aiming for, and to support him/her in that endeavour.

If sound design for a play is mostly about sound content, sound design for a musical is mostly about the delivery of the sound. It's also a much more political and technical job. Unlike a play where your creativity and your computers will be making the noise, in a musical the actors and musicians are your main audio sources. Plus, every sound has to pass through the ears and fingers of the person at the mixing desk, so they had better be pretty good too!

Also, while the director is obviously theoretically in charge in a musical, the sound designer's most important collaborator may well be the musical director, followed closely by the composer, lyricist, orchestral arranger, choreographer, and producer. If working with a director on a play can be said to be a dialogue, the skill required to negotiate the opinions of a large number of important contributors in a musical is more like diplomacy.

There are some things that are common to both plays and musicals: for example, whatever the sound is, live or recorded, sound effect or music, spoken or sung, it has to reach every seat in the auditorium. There's little point in designing a show that only sounds good from the production desk. ■

Charlie and The CHOCOLATE FACTORY

What was your design brief/ concept for this box office hit?

Sam Mendes described it to me first as a big, old-fashioned, family musical. Which it kind of is, except that it uses masses of state-of-the-art technology to help achieve that goal.

Upon hearing a demo of the music, it was clear that the biggest challenge would be to make the complex lyrics as clear as possible over the full sound of a big pit orchestra.

In act two, the brief was to make each room of Willy Wonka's factory magical and unique. As set and costume designer Mark Thompson had come up with a remarkable visual concept for each scene, I took my cue from that, attempting to design an aural world to match.

We went to town with the sound effects design – a 48-channel QLab system with its own mixing desk for maximum flexibility; lots of speakers onstage to locate the sound; a big surround system with sub bass speakers at the rear of each level; and many weeks of recording, editing, and processing. I also bought a few new sound libraries.

My favourite moment was getting the chance to direct Sam Mendes in a recording session. During one inspired lunchtime he created the voices of both the sweet-creating robots Beryl and Bertha. You can still hear his work in the show, although after the pitch changing and processing, you may not recognise it as Sam!

What special challenges did it present?

As in any big, long-running musical, there are at least two understudies for each part, and at least three of every child under 16 – so, three Charlies, three Augustus Gloops, three Violet Beauregardes, and so on. This has two knock-on effects. Firstly, for the sound mixer, every performance has a different combination of performers, with different mic gains, EQ, compression, and mic positions. While much of this can be pre-programmed and selected at the top of each performance, it makes consistency difficult.

Secondly, there is a lot of pre-recorded video and audio of the characters in the show. So there have to be dozens of versions of each recorded moment to match all the potential combinations of the live performers on stage. This means that changes to the show made with one group of actors can have far-reaching effects!

The Theatre Royal Drury Lane is a notoriously difficult theatre to fill evenly with sound. Existing speaker positions are limited, and new ones are not allowed by English Heritage. You have to make each speaker position cover as much of the theatre as possible.

Perhaps the greatest audio challenge in *Charlie* is the set. Mark Thompson has designed a false proscenium, which effectively eliminates most of the useful speaker positions above, below, and to the sides of the stage picture. A great deal of time, negotiation, 3D modelling, and guesswork was required to design aesthetically-acceptable acoustically-transparent grilles around the false pros which would allow me to rig and focus the speakers where I needed them.

What is the basic set up – mixers, monitors, mics, speakers?

We use a DiGiCo SD7T front of house, with an SD8 for sound effects. Speaker processing is a combination of Yamaha DME64s for crosspoint delay matrixing, Meyer Sound Galileos for speaker EQ, and the necessary processing within the L-Acoustics LA-8 amplifiers to make that company's speakers sound as they are intended to sound.

The main PA is made up of L-Acoustics KARA and KIVA line array, and SB18 subs. Delay line arrays in the balcony are Meyer M1-D; front fills, surrounds, and delays are a combination of d&b E0, E6, and Meyer UPM-1Ps. Onstage monitoring is all controlled from FOH, and comprises Meyer UPA-1P, UPJ-1P, and d&b E5 in the stage floor and wings.

The actors' mics are mostly DPA 4061 with a few DPA D:fine omni booms for some tricky moments.

The band mics are a closely guarded secret (not really) but comprise mainly DPA, Neumann, Sennheiser, Audix, Beyer, and AKG.

What was the most difficult scene audio-wise?

The one that introduces Violet Beauregarde and her father. The song is a fast, loud rap, performed by a 12-year-old girl, who is simultaneously throwing shapes within a small box set we call The Big TV. Violet wears a boom mic so that we can extract the maximum gain and clarity from her words.

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Monumental Sound

John Broomhall talks to freelance game audio specialist Stafford Bawler about his Develop Award-nominated work for UsTwo's compelling interactive experience, Monument Valley.

Mention audio production for videogames these days and one's mind perhaps turns to the likes of *GTA*, *Assassins Creed*, and *Tomb Raider* – huge endeavours whose scope and level of detail can be jaw-dropping, with large teams striving to create an interactive blockbuster movie-quality soundscape and score. For those aspiring to work in such rarefied atmospheres, opportunities can seem remote.

However, the burgeoning indie games sector continues to spawn smaller scale (but high-quality) consumer gaming experiences, providing a fantastic arena not just for rookies but also for console game audio veterans who are relishing the chance to eschew being a 'cog in a machine' to direct the entire music, sound, and dialogue instead.

For Stafford Bawler, *Monument Valley* has provided just such an opportunity. With a career stretching back over 17 years, Bawler has worked both in-house and as an outsourcer on some 60 game titles covering everything from MMOs like *Dragon Empires*, to a slew of AAA racing games, such as *Colin McCrae: Dirt*. But his latest gig in the indie game sector, working for the creators of *Monument Valley* – London-based UsTwo – has secured him a coveted nomination in this year's Develop Awards.

Bawler: "I'm absolutely blown away. The game reviews and the feedback on the audio have been incredible. The whole thing has been really inspiring. *Monument Valley* is a puzzle game but it's a journey as well – there's an experience there. Actually, it was conceived as almost like a work of art that you could hang on your wall, yet you can interact and play with it too. UsTwo produces a lot of software and interfaces for large blue-chip firms, but in recent years they started a small games division whose remit is really, 'go make us cool stuff'. From the get-go, they were clear the audio for *Monument Valley* should be quite light, ambient, positive, and uplifting. The player's viewpoint is a high-up isometric view – kind of remote – making you lean towards treating the sounds as if they're sort of miniaturised but actually, these are full-scale structures and the main character you see walking around, Princess Ida, is a normal sized human being – so these are absolutely massive monuments. So, the first pitfall I had to avoid as a sound designer, was to do with getting the correct perspective..."

Development Process

"I started out creating background ambiences based on realistic sounds – and this extended to my approach for materials, say stone-dragging sounds for large slabs of marble sliding against each other, but over a period we realised I was chasing my tail a bit... I was looking for better, smoother material sounds and more perfect ambience, but it became apparent that something more abstract was needed, including sounds with musical tonality.

"The result was that both individual object sounds and the ambient backdrop became very musical – and the more we went on, the less we found we wanted audio realism. Once this principle was established, it completely unlocked my design approach so that I could focus on the mood of each chapter in the journey, and how the story was being told. It became a much more artistic kind of approach."

Conscious that he was now moving from his usual pure sound design role into the realm of music writing, Bawler turned to his trusty vintage hardware synths for inspiration – a Yamaha A4000 sampler, a Roland JX3P, a JV2080, and a Wardolf Blofeld, and in doing so, whether by accident or design, gave *Monument*'s audio a distinct sonic identity.

Bawler adds: "The Blofeld is a very flexible wave table synth – almost like a modular synth. Known for its idiosyncrasies, it can create complex tones and fluctuations that aren't necessarily under your control, but I quite like the unpredictability! In-game, we have a soundscape bed, on top of which, many small musical elements and stings are triggered as you interact with objects and solve puzzles. All this content shares the same instrument sets so you've got this amazing interactive experience with all these rotating and slide-able and drag-able objects that play musical notes as you manipulate them, including a clever system of arpeggios programmed by UsTwo, the musical sequences of which are generated at run-time to play back a set of musical samples in memory which are in tune with, and blend with, the backdrop audio. I edited the sounds and musical elements using Sound Forge and Vegas and we integrated them into the game using Tazman's Fabric plug-in for game engine Unity. We were able to run the most recent build of the game and manipulate and edit the audio in real-time using Fabric.

"*Monument Valley* has definitely made me take a step back and think about music and sound design for games a little differently than I did before. Objectively, as a sound designer, I think when I'm working with composers in the future, and when I'm involved with musical FX creation again myself, I'll be approaching it as a more intertwined part of the experience." ■

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Kenny Young, Media Molecule

Right Place, Right Time: Telling Micro-stories With Sound
Steve Brown, Lionhead

Panel Discussion: AAA Audio Attitude for Tablet and Mobile
Chair. John Broomhall, Game Audio Specialist

Total Immersion: Music and Sound in The Chinese Room
Jessica Curry and Dan Pinchbeck, The Chinese Room

Unity 5 Audio Showcase
Wayne Johnson, Unity Technologies

The Future is Now – But Now What?
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The studio features a vintage Neve 5316 console
Credit: Kan Lailey

BRIGHTON ELECTRIC

A Trip to the Music Hospital

Can it be fair to say the complex is the creative home of music in the seafront city? Jake Young finds out.

I've been calling studios music hospitals for years because people bring really broken music in and we mend it," says Dan Swift, producer at high-end recording and rehearsal complex Brighton Electric. "I don't think that's what it's for at all!"

Our visit to the studio coincided with The Great Escape music festival and although the studio didn't have anyone in on the day the building was buzzing with music as the complex prepared for the parties it hosted throughout the festival. Transmission rates between the more than 17 rooms are very good; however, in the corridor you can hear all the bands crashing away.

Music video site The Crypt Sessions were in the day before to do six filmed sessions. "It was just a little collaboration as our engineers were out for TGE, the space was free, and the Crypt put out fantastic filmed sessions. It seemed a great way to help each other out," says Jimi Wheelwright, who looks after the complex. "They wanted to come down and be close to the action. It brought a lot of new people into the studio and that's always a good thing, I think."

Brighton Electric attracts quite a rich group of legacy bands and recently boasted The Cure in preparation for their Teenage Cancer Trust show at the Royal Albert Hall. The group took over half of the building for their production rehearsal including rehearsal space The Lounge, with the front of house and lighting techs in two other rooms while the manager was in the studio playing old live recordings.

Royal Blood are another of the studio's bigger clients. They use the complex for rehearsal and store all their backline here. The group often locks the complex out, and Tom Dalgety, their producer, has been down a few times for demoing sessions.

The rich history of the studio extends further though, and the first Foals and The Macabees records were written in here while Blood Red Shoes are still residents. "It's got that appeal, this mystique. It's not just recording or rehearsal – it's a community really. I don't think there's anyone in Brighton who's not aware of this place if they're involved in music. Because of the parties and because of the recording studio it certainly feels like a base for everything," says Wheelwright.

The complex offers a wide range of rental stock as well including studio outboard and microphones, splitter tour busses, and PA and backline. Wheelwright: "If you've got your first gig we can do your backline for £60 or if you're a touring band and you need a couple of cages, a proper nine-seater tour bus, and a tour manager then we can do that too. It's basically trying to meet whatever demand there is. It's all happened very organically."

Operating Room

At the heart of the building is the studio, with a Neve 5316 at its heart. "I always call it 33115 because the channel strips are really all we're using," says Swift. "When we decided what we needed we thought, 'well we need the high-end digital but what everyone wants at the moment is a simple and great-sounding analogue front-end, so we need to go back in time to a point where desks were very basic because we don't want any of the functions anymore apart from the mic pre and the nice EQ'. The idea of this is that you've got a 70s desk, which is giving you straightaway in one hit an authentic sound – the sound of real rock bands, proper music."

The studio has got an industry standard set of outboard including a Universal Audio LA-2A, a pair of Universal Audio 1176LNs, a lovely old dbx 162, the modern dbx 162SL, a pair of Dave Hill Designs Titans that link together, the Smart Research C2, and a pair of Empirical Labs Distressors.

Monitoring-wise, the facility is running ATC SCM50 ASLs with extra sub units. The monitor section is run with a Crane Song Avocet. Swift: "It's a little bit over the top just as a control room monitor knob; however, I find it extremely useful to be able to bang between different versions and things. I can run multiple outputs from Pro Tools so if I'm farting around with the bus compression and stuff I can split the signal and actually A/B it, and even the volume's up so that I'm not being seduced by the volume." The studio uses a hear back monitoring

system that all runs digitally from channels 25 to 32. It's a 32 in-out system.

If you want something else the studio can source it or you can bring it in. "The idea of the place is that you've got a manageable and affordable amount because it enables us to bring the cost of the studio in line because we're not buried in gear that we don't often use, that's the point. If we had eight Neumann U87s it would be nice but the first two would be coming out the cupboard all the time so we've just paired it back so that we've got a few of everything that you need really," comments Swift. "For me it works very well – it's a simple setup."

The live room remains available as a rehearsal space simply for economic reasons and has become a favoured space due to its nice acoustics and space. The studio has an isolation booth where people naturally end up doing vocals and other small-scale overdubs but a bass rig and a couple of guitar amps can be dragged in here. "It's a good space and it really is perfectly isolated. I come in here to make phone calls that I don't want anyone to hear, because I know you can't hear through these doors at all."

In July a studio will be built upstairs and the fledgling production rehearsal space will be knocked through and improved. The complex is putting a mobile rig together as well so it can do pop-up recording in the rehearsal rooms or elsewhere. ■

www.brightonelectric.co.uk

Brighton Electric for British Sea Power

Dan Swift talks us through his work on the British Sea Power (BSP) LP Machineries of Joy

Dan Swift

First off, tell me how you got involved in the project.

James Stringfellow [manager, Brighton Electric] has a long relationship with BSP and had just appointed me as senior engineer. I have a long history of working with slightly off-centre bands so in a sense it was long overdue. We had a meeting on James' recommendation and managed not to annoy each other out of a good situation.

What were some of the technical considerations when recording them?

The intention was to record as much as possible live. BSP have a fairly involved set up with multiple amps, concert bass drums, and of course a stuffed bear. The viola had to be separated so we put Abi Fry [viola/keyboards] into Live Room 2 using my laptop for a Skype link (no window). Surprisingly, the tracks were recorded to clicks that to my mind keep things a little too stationary. Yawn.

One has to be in 'ready for anything' mode with a band like BSP, because they work a very varied palette. Some tracks were live smash outs while others began life on laptops. The fun thing with a project of this kind is that once you have the whole studio plugged in you can plonk people down in the live room to record say, an acoustic overdub, and listen out for mics that are being accidently interesting. The gorgeous *Third Man*-sounding acoustic guitar on *When a Warm Wind Blows Through the Grass* is a combination of mics not including the KM 84 I positioned correctly in front of it nor the mic pointing at the Marshall it should never have been plugged into. If you see what I mean...

The guitar sounds are mostly generated by a Twin/AC30 combination with combinations of Royer ribbons and SM57. Martin Noble [guitar/keyboards] uses a lot of FX but we managed to get by without them much to the delight of Geoff Travis [Rough Trade joint MD]. It's so much easier to get good tones in the studio when volume is not an issue.

What was the vocal chain set-up? Did it vary from member to member?

The vocal chain for Scott Wilkinson [vocals/guitar] was U47/Neve 33115/LA-2A. It suits his rich tone well. I used the same chain without compression for Phil Sumner [keyboards/cornet/guitar] but pushed the console channel close to overdrive, not to achieve distortion, but because his voice seemed to explode into life with the added turbo drive. This is most noticeable on *Hail Holy Queen*.

Were there any challenges or special technical skills you had to rely on during the sessions?

I had to ween Martin away from his pedal board to get any kind of tone in the guitar. He was very up for letting me fiddle with the amp settings and a delight to work with. The main challenge is getting a decent sound all in one go, judiciously angling the amps so as the mics point away from the kit. I like to put all the amps back to back like the members of ABBA in the original *Mamma Mia* video. That way they block each other off very effectively (and give me a chance to tell my ABBA joke).

With a band like BSP you have to be careful not to assume they're having a run through, so get set up fast and record it all.

What was the atmosphere like during the sessions?

BSP have been going for 10 years so are used to the studio. They recorded their previous LP themselves and discovered the true horror of trying to be engineers, producers, and writer/performers all at once. Having said that they are very microphone literate, especially Matthew Wood [drums], so it was fun for me to be shown new things, like the Josephson e22S, which sounds enormous and was used on the concert bass drum. You can hear it on *When a Warm Wind Blows Through the Grass*. I used a Shure SM58 on the bear.

British Sea Power – *Machineries of Joy*

Picture: Marco Donazzan

Expert Witness

Audio engineer Dave Swallow talks us through his experience of mixing on large concept consoles.

It wasn't that long ago, when walking out your front door, the chance of taking a tumble over a large-format sound console was pretty high. The world was well stocked with these animals of audio. As with most of these ancient format consoles there is something intrinsically organic about having your entire sonic palette in front of you that leads your mixes into an instinctive, creative place.

The problem with such large consoles is that they had a habit of sending production mangers to the asylum; they take up a lot of space in the truck and on the dance floor. If you needed 96 channels in the past, you'd need two consoles and an area the size of Hemel Hempstead. Now, you can get a console with all the bells and whistles in a tiny footprint compared to their rotund, retro cousins. This means savings and profits.

Large-format consoles have become more akin to a large 'concept' console. Deposited firmly in the binary, the large 'concept' is about DSP, small footprints, large channel counts, and flexibility. This reduction in surface size means a reduction in surface control, to an extent; multi-functioning pots with multi-functioning levels of control. Overall control of the soundscape though has increased with the introduction of gates, comps, and even delays on each channel, but the processes take longer to perform.

My first engagement in this digital world was while I mixed Amy Winehouse when I employed the Avid Profile. As far as 'mid-range' consoles go, this isn't too bad. The surface offers better use of space than its larger brother. Your favourite studio plug-ins can be loaded into your show – although I see this as something that can be trouble, for some this is a major advantage over other consoles. In all my years I've never had one crash on me, until recently. Poor maintenance can lead to the occasional fader malfunction or an AWOL cable renders flipping layers impossible. Potential issues aside, the surface navigation and menus offers advantages over others of a similar price.

Here are a few other options from some of the top manufacturers:

All last year my little Italian band, The Bloody Beetroots, had the new Yamaha CL5 out as the monitor console. With the classic Yamaha sound and enough inputs and outputs to put the telephone exchange out of business, this works out probably the best value for money and a great replacement for their previous range.

Allen & Heath has made very interesting advancements in lower budget console ranges with its iLive system. To me, the tactile systems don't feel as solid as other touring kit but the company's iPad app is the best app created for remote console manipulation. I look on these as a sort of eccentric uncle. You know, the one with the reindeer jumper on 10 weeks before Christmas and a twinkly tie; they might look a bit strange but their heart is in the right place. For an engineer looking to buy and tour their own console this is well worth a consideration.

The youngest company on this list, DiGiCo, has created a range of consoles of every size and budget. Used by a lot of massive productions across the world, its consoles have become a staple at FOH positions. Youth doesn't always guarantee innovation but introducing dynamic EQ to each channel strip addressed some sonically aesthetic issues facing high-level productions and this pushed the idea of subtle EQ into the lower level productions as well.

Like Italians round a cheeseboard, the Midas stands were packed with geeks leaping behind other geeks to glimpse the fantastic XL8 when it was first presented in 2006. In true Midas style the company took its time and created something everyone was talking about, but with price ranges in the region of the GDP of a small African nation it wasn't long before the PRO Series came of age (again), and we were presented with the PRO6, followed by the PRO 3, 9, 2, 2C, and 1. The PRO series are very good boards with a loving, warm sound, pretty easy to navigate on the surface but once into the menu system you'll feel like Frodo Baggins.

Although new to the live scene, SSL has been developing high-level digital consoles the longest. The potential, I think, is huge but with prices beyond Midas or DiGiCo it might be some time before they take over FOH positions. Their next step, maybe into a lighter console, will be revolutionary.

For the moment Soundcraft's Vi6, I think, is the winner. With enough inputs and outputs to keep a mic hungry platoon happy, sound quality that's pretty crystal, stable backend software, and good surface control (though it does take me a while to remember how to use it).

It's rare for many to shy from subterfuge in order to shore up an opinion and the ongoing debate as to which is best will continue in the audio forums for a long time to come. The way I see it is that all these consoles are packed full of innovation, some poorly implemented admittedly, but only through mistakes can any education be achieved. A console is a tool to define your craft, not hinder it. When you choose your console, no matter if it's big or small, think about the ease of it… actually don't think. A console is a personal connection with music and creativity comes from a place that's just over the hill from conscious thought. Choose a console that creates an ease of mind where you don't have to think about the functions, you'll get better results than something that might sound better yet more complex. ■

Expert witness

Dave Swallow
is currently on a world tour with the Italian eccentric electro band The Bloody Beetroots. He's mixed acts such as Amy Winehouse, La Roux, James, DJ Fresh, Billy Ocean, Seasick Steve, and many more.
www.dave-swallow.com

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- Several Control Surface and MixRack variants, which can be mixed and matched in any combination and share the same firmware and data files
- Range of audio interface options, such as Dante, ACE, EtherSound, MADI, ADAT, Waves, and Aviom
- Various mixing control options such as iLive Tweak and Mix Pad apps, iLive Editor control software, or seven iLive control surfaces
- All MixRacks feature the same 64 x 32 RackExtra DSP mix engine architecture
- iLive's FX suite includes a range of classic emulations including reverb, delay, ADT, chorus, dynamic equaliser, and multiband compressor

www.allen-heath.com

AVID

PROFILE SYSTEM

Avid's Profile System offers the same studio-quality sound, powerful performance, and scalable I/O of the D-Show System in a smaller footprint. The system is based around the Profile console and employs the FOH Rack and Stage Rack components for processing and I/O. Ideal for mixing in an arena, club, theatre, or house of worship, the Profile System enables the delivery of the sound clarity artists need to perform at their best, with the utmost reliability.

- Studio-quality sound with optimal clarity and smoothness
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www.avid.com

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- Ultra-low noise, high-headroom analogue mixer for studio, live, front of house, monitor, corporate, and touring audio applications
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- Clip and -20dB LEDs plus EQ in, low cut, mute, solo/PFL, subgroup, and main routing switches on all channels

www.behringer.com

CADAC

CDC EIGHT

CDC eight is Cadac's flagship digital live console with 128 channels and 48 outputs as standard, coupled with a tactile and intuitive user interface. CDC eight's sound quality is a result of Cadac's legendary mic pre circuitry, combined with a proprietary DSP platform featuring time-aligned, phase-coherent mix bus architecture.

- Low latency with less than 400µs from stage through the console to outputs on stage
- Optional MegaCOMMS Router gives up to 3,072 channels in one audio network
- Waves integration
- 16 VCA groups and eight Mute groups
- Library of languages for console labeling

www.cadac-sound.com

DIGICO
SD TEN

The SD Ten features three banks of 12 motorised faders, one master fader, and a 15in backlit TFT touchscreen. It provides a fully-loaded feature set that caters for a front of house or monitor engineer's needs making tasks quick and easy. Application-specific software extensions are available for the SD Ten for both broadcast and theatre use.

- 175 processing paths
- 96 input channels, with 12 Flexi Channels, at 48kHz/96kHz
- 48 aux/sub-group busses
- LR/LCR master buss
- 16 x 16 full processing matrix
- 16 dynamic EQ, DiGiTubes, multiband compressors, and digital FX
- 24 graphic EQ
- Optional Waves integration and optics

www.digico.biz

LAWO
MC²56

The mc²56 combines the proven quality of its predecessors with updated features, improved functions, and clever innovations. The versatile console is available in five different frame sizes, from 16 faders for smaller OB vehicles to 80 faders for more complex projects.

- New Version 5 software adds AutoMix, mxGUI faders, and Ember+ integration
- 888 channels and 144 summing busses with 40-bit floating point processing
- Real two-man operation with fully decentralised control section
- Permanent metering of the 16 central faders
- New button-glow for colour-coding channel strips
- Expanded, simplified touch operation for intuitive working

www.lawo.com

PEAVEY
32FX

FX Series mixers feature new, Peavey-exclusive, technology to enhance live sound reproduction and project studio recording, including 28 Silencer mic preamps, which allow very high gain with low noise and distortion for crystal-clear signal reproduction.

- Two stereo channels with dual mic/line inputs
- Dual DSP engine with digital effects and output processing including Feedback Ferret, 27-band GEQ/five-band PEQ, delay, and limiter
- USB 'A' connection to record directly to or playback from memory stick and USB 'B' connection for digital audio output and input
- Three-band EQ with sweepable mid-frequency and fixed low cut filters
- Four sub groups
- Switching power supply

www.peavey.com

INNOVASON
ECLIPSE GT

Eclipse GT is the world's first digital console to offer fully integrated multi-track recording via the M.A.R.S Multi-track Audio Recording System. Even with its tiny footprint, the console enables you to mix up to 104 inputs simultaneously into 48 mix busses with the capacity to manage 320 inputs on the console using up to five remote audio racks.

- Multipurpose console designed for FOH, monitors, or OB van situations
- New SoundPad feature for easy playback of sound effects
- Digital microphone integration allows you to control microphone parameters
- PANDORA (Pan Digitally Optimized for Real Acoustics) functionality
- Virtual soundcheck at the press of a button
- 64 inputs and outputs on the rear of console

www.innovason.com

MIDAS
PRO X

The new Midas PRO X digital console features the proprietary Neutron engine providing capability of up to 800 audio channels that can be routed on a point-to-point basis. This compact form-factor is ideal where space comes at a premium, but high I/O counts are a must.

- Neutron Audio System Engine with 108 Gigaflops digital signal processing performance
- 99 time-aligned and phase-coherent mix busses
- 40-bit floating point processing with 96kHz sample rate
- HyperMAC and AES50 networking allows up to 288 inputs and 294 outputs at 96kHz
- 36 assignable 1/3 octave Klark Teknik DN370 graph equalisers
- Designed and engineered in England

www.midasconsoles.com

ROLAND
M-480

Now available with a five-year warranty and flight case, the superb sound quality, powerful functions, expandability options, and intuitive operation of the Roland M-480 48-channel digital console enable an enhanced level of flexible audio processing.

- 48 mixing channels plus six stereo returns for a total of 60 channels
- Six built-in stereo (dual-mono) multi-effects and 12 graphic EQs (switchable to eight-band PEQs)
- Four-band advanced parametric EQ and delays on all inputs and outputs
- Supports a cascade connection that enables 96 channels of mixing by connecting a second unit – all via one simple Cat5e/6 cable
- The M-480 can be controlled remotely with a PC/Mac

www.rolandsystemsgroup.co.uk

SSL
LIVE

The SSL Live offers a blend of exemplary audio performance, ample processing power, superb user interface, benchmark processing tools, and total flexibility of console architecture. Its reputation is growing as a beautiful sounding and incredibly satisfying to use live audio console.

- Large-scale (21in) tablet-style capacitive multi-touch screen
- Channel tile combines a second smaller touchscreen with a surrounding array of assignable hardware controls for hands-on channel processing
- Open architecture console layout allows any path type to be placed anywhere on the control surface
- Studio grade mic pres combined with 24-bit/96kHz DACs to deliver a frequency response that is within 0.05dB from 20 to 20kHz (within 1.3dB down to 10Hz).
- On-board effects rack with up to 96 instances selected from over 40 effect types
- Ample flexible processing power for 192 mix paths plus dedicated effects and output matrix processing

www.solid-state-logic.com

SOUNDCRAFT
VI3000

The recently launched Vi3000 reinforces the ongoing commitment by Soundcraft to its flagship Vi Series. This 96-channel 24-stereo-bus console has upwards of 200 cross points of onboard DSP and includes embedded Dante and MADI as standard; as well as up to 48 inputs and 16 outputs of analogue local I/O.

- 96 inputs and 24 stereo busses
- Onboard 'SpiderCore' DSP
- Vistonics – with all new '3D' graphical user interface
- Onboard Dante and MADI
- 64 channels (configurable) of local I/O + local digital and DVI
- Four 32-channel D21 slots
- UAD2 plug-in ready when used with Soundcraft Realtime Rack

www.soundcraft.com

STAGETEC
AURUS

Aurus impresses immediately with its large, user-friendly control surface and powerful audio processing. Each channel strip is equipped with 11 dual encoders and numerous keys, thus avoiding assignment of multiple functions to the same controls and giving direct access to the desired channel parameters. The largest Aurus console built to date provides a total of 96 channel strips. It is scalable with up to 96 channel strips, 300 audio channels, and 128 busses.

- Clear operation as in an analogue desk
- Inputs and outputs via a fibre-optic network with routing
- Excellent microphone A/D converters
- Outstanding dynamic range and guaranteed headroom of 48dB on mix busses
- All audio formats available including Dante Audio-over-IP
- Theatre snapshot automation and dynamic automation
- 40-bit floating-point arithmetic and 32-bit TrueMatch converters

www.stagetec.com

YAMAHA
CL5

Yamaha's CL5 digital mixing console provides flexibility, reliability, and audio quality. With Dante networking at its heart, the CL5 works seamlessly with Yamaha's R-series I/O units, other CL series consoles, Yamaha's new QL series digital consoles, and many other Dante-equipped audio devices to build flexible and scalable mixing solutions.

- Auto Gain Compensation means that multiple consoles can share the inputs from one set of I/O racks (or QL series consoles) without any fear of unexpected level changes
- Premium Effects Rack and CL Effects Rack included as standard
- Pairs of CL series consoles can be cascaded to handle larger mixing requirements
- Three Yamaha MY card slots are included, maintaining compatibility with every existing audio format and for additional inputs/outputs

www.yamahaproaudio.com

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Soundcraft Vi3000

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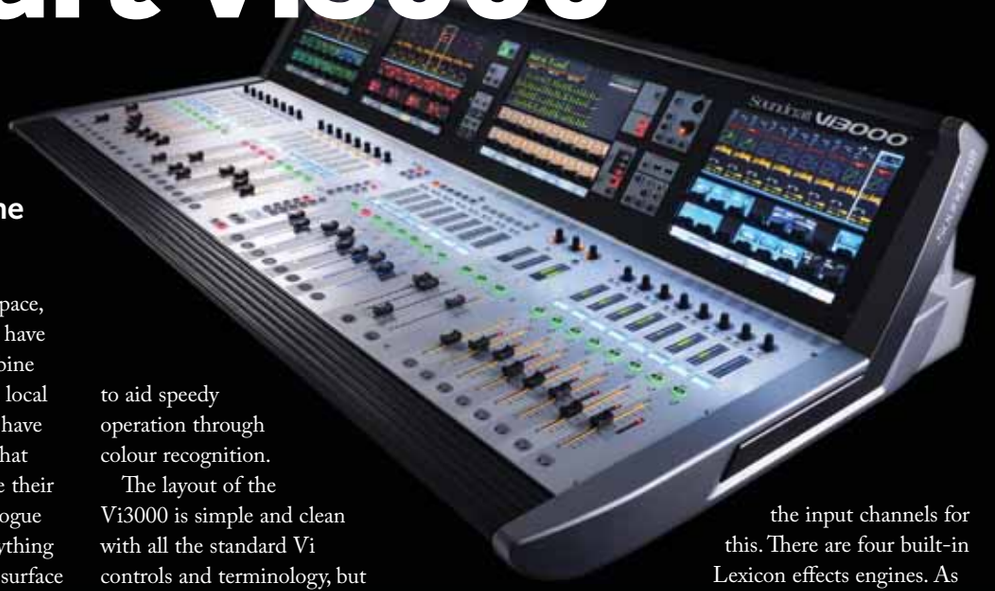

The latest addition to the Vi range is refined and intuitive, and might be the best one yet, writes Simon Allen.

When the Vi6 was launched about eight years ago, not only did it firmly establish the Soundcraft brand as a serious contender in the digital live sound market, but it also offered the simplest transition from the analogue world to digital with quality assurance from the likes of Studer, dbx, BSS, and Lexicon incorporated into the product.

However, Soundcraft's huge success in the digital live console market is partly down to the implementation of Studer's Vistonics, which gave engineers one of the simplest digital live sound consoles to use.

I visited the Harman HQ in Potter's Bar, UK, to meet with product manager Andy Brown with the question on my mind of whether or not the Vi3000 will help spread the Vistonics method to an even wider audience.

UNDER THE HOOD

Probably the largest development in the Vi3000 is the Spidercore DSP technology. This is Soundcraft's terminology for a new arrangement of processing chips, combining its FPGA and SHARC DSP technologies for higher levels of routing and processing power. This is lifted from the Studer Vista 1 and, along with increased power and flexibility, also uses a smaller footprint, allowing the processors to sit inside the control surface. This is unlike the Vi4 and Vi6, which require external DSP processing racks.

Obviously, this is a huge advantage to a wide variety of customers, from permanent installations short on space, to hire companies that have less to transport. Combine this with the on-board local I/O, you don't need to have a stagebox, so installs that wish to continue to use their already integrated analogue looms don't require anything other than the control surface itself. However, stageboxes can still be integrated with the Vi3000, offering a versatile solution, which I will go into more detail on later.

The Vi3000 operates around a 40-bit floating point processing engine, with Lexicon, Studer, BSS, and dbx algorithms that are also found inside the other Vi series consoles. In fact, they all run the same software, of which Andy Brown and the rest of his team are very proud. Any Vi console showfile can be loaded onto any other Vi. There are, of course, certain considerations you have to bare in mind, such as channel count and available effects engines, but these interchangeable showfiles are part of Soundcraft's commitment to its end users.

ON THE SURFACE

Soundcraft has continued its pursuit for simplicity and as such has given the Vi3000 a facelift to set it apart from the existing Vi consoles. The Vi consoles were already some of the most striking consoles around, and the Vi3000 is no exception. One of the much-loved features from the Vi consoles, FaderGlow technology, is also here to stay. I've loved FaderGlow whenever I've found myself on a Vi6, which is part of the Vistonics display method of which existing Vi users are already familiar.

Brown also explained how the split 24 input faders, with the last eight on the right side of the master section, allows for dual engineer operation. This is quite rare for many digital consoles, and unseen in this price bracket.

Other visual improvements added to the new-look Vi3000 are the 3D graphics. Soundcraft has completely revamped the graphics for all sections of the Vistonics software, which certainly add more depth to the screens. There isn't a significant improvement in sound quality, but it does display the higher-powered graphics chips that come in the Vi3000. Combine this with the DVI monitor output and possibly this is a hint at future developments?

FUTURE I/O

As mentioned earlier, as well as the on-board processing, the Vi3000 comes with local I/O. This too can be customised, which isn't something every manufacturer offers. There are four I/O card slots, which can be any configuration of XLR inputs and outputs. For example, a standard configuration might be 48 mic pres in, and 16 XLR line outputs. Having said that, the console can also work with stageboxes offering up to 64 channels in conjunction with its own I/O for greater flexibility and channel count.

The Vi3000 is a 96-channel mixer but doesn't offer independent effects returns, so you have to use some of the input channels for this. There are four built-in Lexicon effects engines. As well as L-C-R master output busses there are 24 mono or stereo busses, which can be user-assigned as auxiliaries, groups, or matrixes. These are true mono or stereo busses, rather than a stereo bus taking up two of the 24. Graphic EQs are available on all output busses by default.

Also on the rear of the console, along with dual redundant power supplies as standard, there is a built-in Dante connection. This is really interesting as it shows Soundcraft's commitment to the networked audio protocol as manufacturers are all going their different ways. We might be some time away from an industry standard, if it happens at all, but this is a stepping-stone and Dante is certainly gaining strength. The other initiative is that the Dante card also offers parallel MADI connections. I don't think we've seen this before, but it makes perfect sense.

The Vi3000 has two D21m option card slots for further I/O expansion. These could become useful, for example, when using Soundcraft's new Realtime Rack. Realtime Rack was only launched this year, but is something to watch out for. It offers some additional, hardware-based DSP processing, for 16 channels of UAD plug-ins.

As well as the connectivity to aid speedy operation through colour recognition.

The layout of the Vi3000 is simple and clean with all the standard Vi controls and terminology, but with some small refinements. As this is a 96-channel mixer, these can now be recalled easily in four layers compared to the 'button-short' Vi4. Outputs too are now always to hand right from the control surface. It's these small changes, along with a simple metering view on the central touchscreen, that make the Vi3000 very ergonomic and allow best use of the layout

"The Vi3000 has done more than fill a gap in the already successful line of professional products from Soundcraft. It sets a new level of integration via endless I/O options and control features." Simon Allen

(L-R) Soundcraft marketing director Keith Watson, Simon Allen, Vi series product manager Andy Brown

Jory MacKay talks to Vi Series senior product manager Andy Brown about the inspiration behind the Vi3000.

Tell me a bit about the design process of the Vi3000 – how long ago did the development process start and what, if anything, spurred the decision?
The inspiration for the Vi3000 came from customer feedback, market pricing and already having two successful platforms in the form of the Vi4 and the Studer Vista 1, which allowed us to fast-track the development of the Vi3000. The overall programme took less than 12 months from concept to shipping.

Were there any specific demands from users that you tried to address during the design?
Yes, many Vi users particularly value the patented Vistonics II user interface and along with FaderGlow, this provides the fastest and easiest console interface on the market, so we improved it! We've added '3D' icons and made colour changes that make the four touchscreens even easier to use providing 24-channel views at all times. Customers often want to connect a stagebox, others want to have local I/O on the console, so we've made both possible and built in the new SpiderCore DSP and I/O engine based on the Studer Vista 1 platform. We also wanted to add more network capabilities so by building in the 64-channel Dante interface as standard, we now offer the customer two additional option card slots, therefore they can choose more easily what configuration they want to use, maybe a stagebox, an external hard disc recorder or the new Soundcraft Realtime Rack plug-in engine, among other options.

Where does it fit within the Vi range and who are the primary end users?
The Vi3000 is the next phase in extending the Vi family to users that have not been able to use a Vi before. The Vi3000 sits above the 'all-in-one-box' Vi1, based on first shipments in the past two months, we are seeing it go into mid-sized tours, 3,000-person-sized clubs, performing arts centres, houses of worship, and mid-sized theatres.

The digital live console market is quite a competitive one. What are some of the unique features that set the Vi3000 apart from the competition?
The Vi3000 features four Vistonics screens providing more channel visibility than any other digital console on the market; 3D graphics on all Vistonics touchscreens; FaderGlow providing coloured illuminations on fader strips identifying fader assignments; connection to the Soundcraft Realtime Rack of integrated plug-ins (collaboration with Universal Audio); the new SpiderCore processing from Studer; all-in-one local I/O and processing, which reduces footprint and weight and can plug straight into an existing installation multi-core; 96 mono/48 stereo inputs; 24 mono/stereo output busses; 48 in/16 out/ 4 AES local I/O; 1 MADI (64 channel); and 1 or 2 64-channel stageboxes.

The Vi3000 is the first Soundcraft desk to incorporate a Dante interface – how did that decision come about?
We've had a Dante interface on our Si and Vi ranges for a while, but this is the first time it's been built in as standard, part of the reason is we are transport agnostic, so if the customer wants it, we'll try to supply it. It also makes both flexible option slots available for the customer to choose what he or she wants to use them for, rather than having to use one for Dante.

How has the response been since the launch?
'Overwhelming' we've had the factory on double shifts to meet the first few weeks' demand and more orders are confirming its popularity.

of Realtime Rack and the ability of saving plug-in settings with showfiles, the Vi3000 also offers HiQnet control and VM² wireless microphone monitoring. VM² shows the engineer important information such as RF and battery levels, which is really clear on the Vistonics displays.

USER POWER

The Vistonics concept is to have maximum visibility of everything that is going on in your mix(es) and to have direct access to all functions, which is why many consider the Vi series to have the closest resemblance to the traditional analogue console layout and it allows even untrained users the ability to get up and running in a matter of minutes. Vistonics is simple and effective, which is so important in the live sound world. It can be too easy with some other consoles on the market, to get lost in menus and for the set-up to take too long. If you're a hire company that wants to offer a digital console that any engineer will be able to use, or a company that does many different shows in different venues (often with little set-up time) then the Vi series are a good choice.

As well as the simplicity of Vistonics, Soundcraft also offers all the other services associated with pro digital consoles such as off-line showfile editing. An iPad app called ViSi is also available for remote control of the consoles from anywhere in the venue. This can be ideal for setting monitor levels on the stage, or listening to the mix from different vantage points.

CONCLUSION

The Vi3000 has done more than fill a gap in the already successful line of professional products from Soundcraft. It sets a new level of integration via endless I/O options and control features. Combine this with the refined looks and graphics and this is an extremely versatile console with a lot to offer straight out of one box. I think there are many customers who have been waiting for this product and possibly don't even realise it yet. The Vistonics method of working is simple yet professional, and deserves more attention than it has so far, which the Vi3000 will help promote. The fact that a hire company can stock a single product for a vast number of applications, which can be operated by almost any engineer, shows that this is a safe investment for which buyers can be sure to receive long-term support from a well-respected brand. ■

The Reviewer

Simon Allen
is a full-time sound engineer and record producer. After a stint as senior engineer at City Studios in Cyprus where he headed up the new music studio, he can now mostly be found at Woodbury Studios in Hertfordshire.

INFORMATION

Feature Set
- New SpiderCore DSP engine adapted from the Studer Vista 1
- 3D Vistonics interface provides direct access to all functions with maximum information and visibility at all times
- Four touchscreens for use by two engineers at the same time
- Dante, MADI, and more, all built-in
- RRP: from £24k ex VAT (according to configuration)

www.soundcraft.com

Neumann TLM 107

STUDIO MICROPHONE

Stephen Bennett puts the latest release from Neumann to real-world tests and finds it stacks up nicely to its vintage siblings.

The release of a new microphone from Neumann should be a welcome event for us audio geeks, but I wonder if, for the company itself, it's always something of a two-edged sword? Neumann's reputation, built on condenser microphones such as the U87, U67, and variants of the U47, means that any new boy on the block is unfairly and, usually unfavourably, compared to these classics.

Undaunted, Neumann continues to innovate. The latest baby on the block, the TLM 107 utilises a capsule based on the D-01 – so that should immediately endear it to those who regard the 'digital' microphone as one of Neumann's modern classics. What may not be so readily welcomed though, is the physical design of the TLM 107. Eschewing the long silver tube of the U87 or the squat cylinder of the TLM 49, the short body of the TLM 107 is more akin to some of the models in the Audio-Technica range or, as some online wit had it, NASA's latest spacesuit design. Whatever you think of its rounded curves, its size means that it's going to be easy to place in most recording situations.

First impressions

The TLM 107 is a multi-pattern condenser mic. It features a large double-diaphragm capsule with a flat frequency response up to approximately 8kHz, with a gentle feed upward into a wide, flat presence boost. This, of course, implies that the microphone is primarily designed to capture vocals – although that smooth upper frequency lift can be extremely useful in most recording situations.

The TLM 107 offers the user five polar patterns – namely omnidirectional, cardioid, wide-angle cardioid, hypercardioid, and figure of eight – selected by a novel navigation switch/joystick combo affixed to the back of the mic. As you would expect, the TLM 107 is beautifully finished and the joystick is firm in operation – I have no doubt that it would take the slings and arrows of outrageous studio use in its stride. Once +48V phantom powering is applied, pressing the joystick allows the polar pattern to be selected by flicking it up or down, with the chosen setting illuminated by LEDs. The -6dB or -12dB pads are selected by moving the joystick to the left, while the high-pass filter – with a cutoff frequency of -3dB – can be set at 40Hz or 100Hz by moving the joystick towards the right, with LEDs again illuminating your selection.

One minor niggle is that the LEDs are only illuminated for 15 seconds – I'd have preferred that there were a choice to have them on permanently, as that would make it easier to see what the settings were when working with a lot of microphones – although the power saving might be important if you're using a battery operated rig. The TLM 107 can also be powered using Neumann's N 248 power supply, which usefully enables the remote selection of polar patterns.

In use

The TLM 107 is a low-noise transformerless design and its specifications are exemplary. Signal to noise is 72dB, and the maximum SPL it can handle is an ear-splitting 141dB to 153dB, depending on the pad setting. Neumann supplies measurement charts showing the frequency balance of the individual polar patterns, so you can easily make judgements on the usefulness of the mic in a given application. However, specifications are only part of the equation and proof of the sonic pudding is in the studio.

I initially decided to test the mic in two common recording situations – recording a Mariah-a-like female vocalist and a solo violin in a church. On vocals, the TLM 107 proved immune to the SPL hitting it from close quarters and reproduced the singer's powerful tones while adding no additional stridence of its own. I tried the various multi-patterns on the violin and eventually chose the omnidirectional mode as it captured a nice balance between player and room. Additional work with a typical day's recording of guitar, drums, flute, sax, and bass proved the microphone's versatility – the setting of the pads' attenuation and the cutoff frequency are well chosen taming double basses, close mic'ed male singers, and bass drums without breaking a sweat.

The microphone that I own that is probably the nearest competitor to the TLM 107 is the AKG 414 XL II, a similar size multipattern condenser. Sonically, the two are quite different though, with the TLM 107 being a tad brighter, while not displaying the harshness you often find in a cheap microphone, rather it's a smooth improvement in high-frequency definition that can really be useful when mixing. I often find that a microphone only shows its sonic mettle when trying to blend recorded audio in a mix.

"I often find that a microphone only shows its sonic mettle when trying to blend recorded audio in a mix. In this scenario, the TLM 107 passes this test with aplomb." Stephen Bennett

In this scenario, the TLM 107 passes this test with aplomb – slipping it in with the 414s on a recording of a string quartet posed no problems at all, while its low self-noise means that it also takes compression well. In comparison to my 80s U87, the TLM 107 appears to have improved upper frequency definition, better handling of proximity effect, and a higher resistance to belters – I'm inclined to believe it'd be a preferable choice over my vintage Neumann in most vocal recording situations.

Conclusion

The TLM 107 is a welcome addition to the Neumann range and its small design, impressive build, technical specifications, and useful and innovative controls means that it should find favour in many applications. ■

The Reviewer

Stephen Bennett has been involved in music production for over 30 years. Based in Norwich he splits his time between writing books and articles on music technology, recording and touring, and lecturing at the University of East Anglia.

INFORMATION

Feature Set

- Multi-pattern large-diaphragm microphone
- Five selectable polar patterns
- Navigation switch with LEDs (polar pattern, PAD, low cut)
- Signal to noise ratio of 72dB
- RRP: £1,099 (+VAT)

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Tascam DR-60D

DIGITAL RECORDER

The DR-60D is an easy-to-use option for capturing high-quality audio on a DSLR, writes Jerry Ibbotson.

A couple of months ago I wrote an article about audio for DSLR film production (see *Audio Media* April 2014), or rather how bad sound gets when shooting video on a DSLR camera. While the pictures may be fabulous, the audio is… not. One of the bits of kit I took a quick look at was the Tascam DR-60D, a compact recorder/mixer that is specifically designed to hang off the belly of a camera. Although I didn't have time to give it a full road test at the time, it interested me enough to have a second look.

The machine itself is intriguing. When I posted a couple of pictures of it on social media, quite a few of my friends from both filmmaking and audio popped up with comments along the lines of, "Oooh, can I have a play?"

Tascam has certainly done a good job with the aesthetics. I know that, as hardened professionals we're meant to be above such things but visuals do have an impact.

The Details

The DR-60 is built around a rectangular 'block'. On the main face (the one the camera operator looks at) is an LCD screen and an array of dials and buttons. You have three gain dials, dip-switches for Line/Mic/Phantom Power, transport buttons, menu and function buttons, and a select dial that doubles as the Enter button.

On one end of the machine are the inputs, which consist of two Mic/Line XLRs plus a 3.5mm stereo input for channels three and four. Beside these is the 'interesting' stuff. As I mentioned in my previous article, if you're going to feed out to a DSLR it has to be at Mic level, so the DR-60 has a Camera Out that is essentially just that – an audio feed that is at a pre-preamp point in the signal path. It even comes with a volume/output dial for added flexibility.

There's also a 'Camera In' socket, which is designed to accept the feed from a DSLR's headphone out (if such a thing exists). The DR-60 gives you the option to monitor this signal, so you can check what the camera is actually recording.

Flicking the DR-60 over in my hands, the other end of the machine has an SD card slot, a USB socket, a headphone socket, and a line out.

With the machine powered up with four AA cells you're presented with an LCD display that would be familiar to anyone who has used a small portable recorder in recent years. I put it to the ultimate test – trying to set up the basic record functions without reading the manual. It was a doddle.

There are plenty of options to choose from, such as .wav or .bwf file formats and sample rates from 44.1k to 96k at bit depths up to 24-bit. One useful feature is the ability to fire a burst of tone to both the DR-60's recording and out to the camera, to aid sync in post. This can be done either manually or automatically – triggered when the DR-60 starts recording.

On the top of the DR-60 is the mounting bracket for attaching the recorder to the base of a DSLR via its tripod thread. I fitted it to my own Nikon D5100 and sourced a (very) short mini-jack to mini-jack lead to link the two machines together.

In Use

In use, the DR-60 is pretty straightforward. The gain pots are easy to use and the level display is clear, though the meter doesn't have numbers along its length. However, there is a marking for -18dB which at least helps.

The first thing I did was to calibrate the output of the DR-60 to the camera. I'd learned during the research of my previous feature that the key with DSLR audio is to keep the record gain low, in order to keep the noise floor at bay. I set the Nikon to its lowest record gain (it has three manual record levels) and set the Camera Out dial on the Tascam to different levels. Through a bit of experimentation I found that having it at full whack produces a recording on the camera at the same level to the recorder.

One quirk that came up with my initial recordings concerned the tone burst. I'd set this to trigger automatically each time the Tascam's record button is pressed. But when the camera's audio file was laid next to the recorder's I noticed the squib from the Tascam was shorter than the one recorded by the Nikon. I can only assume this is because the camera got 'rolling' slightly quicker than its audio cousin did. By switching the tone control to manual (now triggered by a Slate button) the problem disappeared.

One big question for me was: could I use the DR-60D as a mixer? Could I use the audio recorded by the camera, sent via the Tascam, to avoid the faff of having to sync up later?

I conducted a few tests using the Nikon, the DR-60, and a Rode NTG3 shotgun mic. The latter alone marks a huge step up from the hardware I've seen most DSLR video shooters use and, crucially, it was off camera and hand held.

I removed the SD cards from my camera and recorder and copied the files off. They were loaded into a video editor – Premiere – for comparison.

Syncing up the recorder audio with the camera material wasn't as much of a hassle as I'd been imagining (once I'd sorted the tone function out). Then came the comparison. Unsurprisingly, the audio recorded by the Tascam was clearly better. You could hear the detail in the spoken dialogue and make out the spit-on-the-lips detail, versus the slightly muddied version reproduced by my Nikon. If you were working on a project that afforded you the time, this is the version to use.

But (and it's a biggie) if you were in a rush and facing a deadline, the camera audio would suffice. Bear in mind the Tascam allows you to use a 'proper' mic on a 'proper' connection and to set level and to monitor. Even with the camera doing the AD work and preamplification, it's enough to raise the bar enormously versus a more basic plug-in microphone or (shudders) the built-in 'mic'. And you always have the Tascam's own audio to fall back on: clear, sharp, and better than some standalone audio recorders I have used. It really does work as either a mixer or recorder.

If you're involved in DSLR video production, this is definitely worth looking at. ■

The Reviewer

Jerry Ibbotson
has worked in pro audio for more than 20 years, first as a BBC radio journalist and then as a sound designer in the games industry. He's now a freelance audio producer and writer.

INFORMATION

Feature Set

- High-quality HDDA mic preamps
- Four inputs, three outputs, and simultaneous four-track recording with mixer controls built-in
- Dedicated 'Camera Out' provides simultaneous recording between unit and camera
- Slate tone generator for easy match-up in post
- RRP: £289 (inc VAT)

www.tascam.com

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ADL Penteo 4 Pro

STEREO TO 5.1 UP-MIXING PLUG-IN

ADL's new up-mixing plug-in is a must-have for those working in post, writes Mike Aiton.

Life in Pro Tools HD TDM was simple – if you had stereo and needed a 5.1 mix, then you mortgaged your granny and ponied up for TC Electronic's TDM Unwrap.

Time and technology have thankfully moved on at a joyous pace since and with the advent of Pro Tools 11 and AAX plug-ins there is a new kid on the block that is causing a stir, especially as the Native (i.e. non-DSP) boys are finally able to come to the party.

ADL's Penteo 4 Pro is available on both Mac (10.5 upwards), and Windows (XP upwards), as native AAX 64 bit, RTAS VST2.4, or AU – all on one installer. It uses iLOK2 authorisation (so it is portable).

EFFICIENCY

I ran one instance and got a 10% CPU usage on my Pro Tools PC (3.5GHz i7x8) running OSX 10.8.5. Just for fun I duplicated the track nine times, and for 10 up-mixers (a totally impossible task in the TDM days). I got a very respectable 32% CPU usage. Penteo 4 Pro AAX uses 52% less CPU than Penteo Pro 3 – great efficiency saving there chaps.

METHOD

Penteo 4 Pro doesn't use any phasing, matrixing, steering, reverb, delay, or any artificial means to generate its 5.1 mix. This gives it the unique ability to be folded back with the ITU down-mix parameters back to its original stereo mix, all but indistinguishably.

The Penteo algorithm works by dividing stereo signals into three categories: Mono Components (where L=R); Differential Components (where L does not equal R) i.e hard-panned elements; and Intermediate Components – signals that are partially similar.

Mono signals are sent to the centre speaker, intermediate are sent to the L & R, and differential ones are sent to the surrounds.

Artistic control of the sound distribution is given by varying three controls: the Mode Selector and the two balance adjustment faders; the C Fader; and Ls-Rs Fader (where relevant). Irrespective of the settings, the down-mix compatibility to the original stereo file is always maintained.

INTERFACE

Penteo 4 Pro supports multi-touch, so I am able to control multiple faders and adjust multiple plug-in parameters simultaneously with my Slate Raven MTi (it will work with any multitouch interface and is optimised for Raven MTX). The plug-in layout has been thoughtfully designed and is very clean and uncluttered. Mutes and Solos are available for each of the L C R Ls Rs Sw channels, just above the metering. Plug-in bypass routes the audio to the stereo L & R channels, as you would expect.

Input gains vary from -20dB to +10dB and should be used to finely adjust the channel balance so that the centre channel is accurately extracted.

The six modes are:

1. **Hard Center:** A 5.1 setting that creates a totally discrete C. If C fader is at zero then there is no phantom C. Conversely if C fader is pushed above zero then some anti phase C is added for a narrowing effect.
2. **Penteo Music:** General-purpose setting. Partly creates a discrete C channel.
3. **Stereo Plus:** The set and forget option. If the Ls & Rs are "lost" the foldown is still perfect.
4. **Quadrophonic:** The C content is removed and fed to the L & R.
5. **LCR:** A diverged stereo mode with no Ls or Rs.
6. **Triangle:** Discrete C, no L and R. Ls & Rs as normal.

The LF Section (in grey) controls the LF energy. The LF effect has three modes: Off – the LF controls have no effect; Boost – LFE content is added without removing LF from the main channels; and Split – total LF content is the same as input, but LFE shares workload.

Frequency is the crossover point below which the LF controls act.

LFE – allows attenuation of the LFE to nothing.

Diverge – redirects the LF content from the C to the L & R outputs.

SYSTEM DELAYS

Penteo 4 Pro requires a delay of five frames (@25fps) to enable it to look ahead and work out its magic, all within Avid's delay compensation remedy zone. A hardware buffer of 256 samples is recommended for your Avid playback engine. ADL has also thoughtfully included a low latency mode that reduces the latency (for those that worry or have no delay compensation) to two frames (@25fps).

IN USE

I have spent a long time with this plug-in and really like it – a lot! It sounds great, folds down perfectly – which is absolutely vital in my broadcast post work as the stereo HD listeners usually listen to set top box fold down of the 5.1 mix.

I have tried it on a great variety of material, from the easy (well recorded classical and choral) to the potentially troublesome (short, very dry pop music) – it copes very well and with the flick of the mode or a duck or boost in the Ls Rs fader, suited my ears and brought a smile to my face, much like TC's Unwrap Dry preset used to.

I always like to follow my up-mixes with an instance of Maggot Software's spanner, so that I am able to collapse the 5.1 should the mix require it, or 'whoosh the up-mix from mono to 5.1'.

CONCLUSION

There is no totally set and forget 'one knob' with up-mixing work, or one plug-in that will always sound better than any other. If your original recording has problems, your 5.1 up-mix will have problems and you will need to do additional work. One thing I can say with confidence though, is that this is as good as it gets for broadcast, as you will not have to be worrying about your fold-downs or spending time fighting the interface. Penteo 4 Pro is great sounding, and a highly effective and efficient plug-in. It is definitely my weapon of choice. ■

The Reviewer

Mike Aiton was weaned at the BBC. But after breaking free nearly 20 years ago and becoming one of London's busiest freelance dubbing mixers, he can mostly be found in his Twickenham dubbing suite, mikerophonics. In his spare time he takes therapy for his poor jazz guitar playing and his addiction to skiing and Nikon lenses.

INFORMATION

Feature Set

- Stereo to 5.1 up-mixing plug-in
- Available for Mac OSX (10.5 and up) and Windows (XP and up) as native AAX 64 bit, RTAS, VST2.4, or AU
- 52% less CPU usage than Penteo Pro 3
- Low latency mode that reduces the latency to 2 frames (@ 25fps)
- RRP: £479 +VAT (until 31 July 2014)

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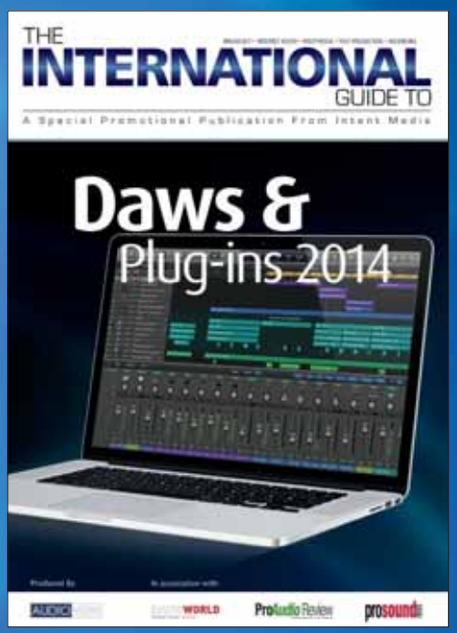

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Harrison Lineage Preamp and 832c Filter Unit

PREAMP & FILTER UNIT

Can these two units recreate the magic of Harrison's vintage consoles? Rob Tavaglione finds out.

AC/DC's *Back In Black*, Fleetwood Mac's *Rumours*, numerous Queen releases and even Michael Jackson's *Thriller* weren't mixed on a Neve or SSL, but on a Harrison, an upstart 1970s desk manufacturer based in Nashville. Harrison made a name for itself with the 3232 console (or the 32c), a desk known for very low noise, exceptional musical clarity, and a punchy yet round bottom end to die for.

That sonorous era and others are found in the Lineage preamp and the 832c Filter Unit. Each are eight-channel units, sharing a certain synergy that makes them ideal when utilised and viewed as a single front-end system.

According to Harrison, the Lineage incorporates four decades of Harrison mic preamp designs, with two channels per decade range:

1/2: Harrison's latest Trion preamps that utilise a Lundahl transformer on the input, DI, numerous additional features, and 70dB of gain.

3/4: The 70s/80s, with the 32c's transformerless parallel discrete input stage with a static bias scheme (which sounds like transformers).

5/6: The 80s/90s, with the Series 10, a low-noise, single discrete input stage design.

7/8: The 90s/00s, with the Series 12, a single input stage, a dual output stage and FET-compensated headroom.

The 832c Filter Unit provides four key features: seven segment LED metering, continuously variable high and low-pass filters, and the Bump circuit, which provides a resonant boost slightly higher in frequency than the HPF filter point. The two units connect via a single DB25 cable and the 832c outputs +4 audio via DB25, too.

In Use

The Lineage provides classic Harrison sounds with differentiation between the mic amps that novices may barely notice, but vets will labour over as 'secret weapons'. I put together a band of local musicians and recording pros to lay down some old-school style tracks using all Harrison pres and filters.

> **'If you value the legendary sonics and production methodologies of the 70s this will take you places only time machines can' Rob Tavaglione**

The 32c preamps clearly provided the 'classic rock/vintage' sound we know and love. They achieved saturation the most readily and showed a warmth, natural compression, and plumpness to their voicing. The guys loved them on most everything (except drum overheads) and I liked them too, with a little more reservation (they can get kind of dark). We used them on snare and drum room (via AEA ribbon) for our drum tracks and really admired them on kick, toms, guitar, and bass.

The Series 10 pres were our least favourite. Despite being not as linear, pristine, or as colourful as the others, they remain very fine mic amps and eminently usable. We used them on kick for our drum tracks and again on lead vocals. They conveyed a certain detail in the vocals that we liked.

The Series 12 preamps might've just been my favourites. The stereo image, soundstage, dynamics, quickness, and seemingly perfectly flat response on drum overheads blew me away! This accuracy and linearity is not bland, mind you, just true and impressive. Beyond overheads, we used these beauties on guitar, bass, and backup vox with nothing but transparent and impressive audio.

The modern Trion preamps are quite cool in their own right. Sonically, they're closest to the Series 12 pres with punch, power, and clarity but they pack some extra user conveniences including front panel inputs, instrument 0.25in inputs (bypassing the transformer for an FET input stage), and 'Fix' (allows the storing of exact gain settings to memory on little tweaker trims for one-button recall). These amps are hot, too – watch those levels, as they will saturate pretty nicely (there's no output level control, so a compressor in line will likely help). We loved them on toms where a little saturated fullness is often welcome, and they did a fine job on lead guitar. Overall, the Trion preamps are the most versatile.

The 832c Filter Unit may seem like a luxury, but it's a necessity, as far as I'm concerned. First off, you'll need the metering as the Lineage only sports red peak LEDs. The LPFs I seldom use, but they get the job done. And the key of the 832c is the wonderful HPF set. Like a 3232 and its gorgeous bottom (remember *Rumours* and its sonic euphony?) these resonant filters put a little 'junk in the trunk' and a little bounce in your walk when you're using 'Bump'. The well-tuned HPF with Bump actually fattens while it thins – it rules!

Conclusion

As much as I loved the units, they aren't perfect. The switches don't feel particularly impressive and it's hard to see their position. The gain pots are better, but they're not great. Other than that, though, these units offer sonic excellence, range, and flexibility. Most importantly, they offer a musicality that is hard to match. ■

The Reviewer

Rob Tavaglione has owned and operated Catalyst Recording in Charlotte, North Carolina since 1995. Rob has also dabbled in nearly all forms of pro-audio work including mixing live and taped TV broadcasts (winning two regional Emmy Awards); mixing concert and club sound; and mixing and music supervising for indie films.
www.catalystrecording.com

INFORMATION

Feature Set
Lineage Preamp
- Incorporates four decades of Harrison mic pre designs including the new Trion preamps
- 'Fix' gain preset on Trion preamps
- RRP $2,995

832c Filter Unit
- Eight channels of HP/LP filters from Harrison's 32-series console
- 'Bump' button creates resonant boost just above the selected HPF frequency
- RRP $2,395

www.harrisonconsoles.com

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Gareth Jones

The legendary mix engineer and producer sits down with Jory MacKay to talk history, favourite projects, gear, and what's next.

Gareth Jones is one of those success stories that gives hope to anyone trying to claw their way up the recording studio ladder. With little to no training (other than a minor stint at the BBC) Jones moved from a small analogue eight-track studio in north London to the holy halls of Hansa Studios in Berlin, and beyond. His moody aesthetic, which blends dark electronic with more guitar-driven pop music has led him to work on albums for artists such as Depeche Mode, Erasure, Grizzly Bear, Interpol, and more.

When did you first know you wanted a career in the recording industry?

Gradually, I worked out by looking at record covers that records are made by teams of people and there is always a recording engineer. So I left college, tried to get a job in a recording studio and couldn't. I didn't know how to do it. I wrote a lot of letters and got a lot of refusal letters back. Everyone's got an Abbey Road refusal letter.

Luckily I was able to get a job at the BBC. I just wanted to record music and be around music and bands but it was pretty clear that it would be around seven years before they would let me do any recording because all I was doing was turning one rotary fader and pressing play on a tape machine.

So I wrote to all the London studios I could get the address for, again, and a guy named Mike Finesilver, who was working in one of them, mentioned that he was looking for someone to work in his eight-track studio. He read my application and gave me a call.

So that was your first job in a 'real' recording studio?

Yes, it was a really cool, funky little studio – dirty and smelly, but analogue eight-track, one-inch with a custom analogue desk by Barry Farmer, homebuilt echo plate – very simple, but great for me.

I've told this story before, but my first time recording a drum kit the drummer said 'turn the snare up' and I didn't know which one it was! That's how much I was thrown in. I knew about drums, but I had never played the drums or been in a rock 'n' roll band.

I learned a lot just from the musicians I was working with. Clive Langer produced the first Madness single in there. I did some work with Pete Brown, the Poet and his producer, Ian Lynn. I was the junior engineer and that was one of the first records I helped complete.

So tell me about working on John Foxx's Metamatic?

John came in and he was really my second great mentor because he had made three albums with Ultravox. He had worked with Brian Eno and Conny Planck, so compared to me he was hugely experienced and I learned a lot from him.

He wanted to make a minimal record. So what he did was use very few instruments in a studio with very few tracks. He had one drum machine, one monophonic synthesizer, and one string machine, and eight tracks. Of course it turned out minimal because how could it not?

And how did that experience lead you to work with Depeche Mode?

We did *Metamatic* and it worked out well and John, because he chose to make the album in an eight-track studio that was cheap, broke the debt cycle to the record company.

On Holywell Lane [in east London] there's a big warehouse on the corner and John got together with three other artists and bought it. John went in the basement and that got turned into a studio. We met Andy Munro early in his career because we'd worked at one of his rooms and it seemed cool and modern, which is what John was after.

Because John was such a legend as a synth minimalist, the studio got a reputation and Daniel [Miller] at Mute and Depeche were looking for somewhere for their third LP.

Daniel and the band were co-producing and they needed an engineer. John said I had to meet these guys and it could be good and I just said 'I don't want to do that one, it's too pop'. So they worked in the studio anyway with a different engineer and they liked the studio but not the engineer so fortunately I got a second chance.

And then you became their go-to guy. How did this progress from working in John Foxx's studio to working out of Hansa?

We started in London and took [the album] to Berlin. I was working in Berlin and was taken to the legendary Hansa studio, but originally didn't want to work there. I wanted to mix in London because I was insecure but then I was shown the penthouse SSL mixing studio. I had never worked on an SSL but I knew all about them because they were *the* brand in the UK in the 80s. So there was this massive great SSL board and I said 'ok, we're doing it here!'

Hansa in the 80s has such a history surrounding it. What was the vibe like working in a place like that?

There were many big bands in there – The Rolling Stones came with Chris Kimsey, Killing Joke came, Depeche Mode, Fad Gadget, The Birthday Part, Nick Cave and the Bad Seeds. I was the token British engineer with a rock and roll attitude. I loved it.

Obviously the city was still divided. You could see the wall and the watchtowers from the Studio 2 control room window. From the roof you could look over no-mans land to East Berlin. There was an incredible atmosphere. It was super special for everyone who worked there.

Now you're back at Strongroom in London.

Yes! This studio was originally built for me in the 90s. When I came back I took out a little space in the building and then my 'old' studio became available. Seemed like fate.

Obviously you've always been a fan of technology. Can you run me through your current set-up?

It's a really simple ITB set-up with lots of UAD. I'm a big fan of these Metric Halo convertors – they also have really nice mic pres, which is one of the reasons I went with them. I use the Metric Halo mixer to feed out 14 discrete outputs into my Fat Bustard valve mixer, which is legendary. And then I've got high-end EQ on the mix bus, and then the mix streams back into Logic where I print it.

I love the Mackie control stuff as well because it is so beautifully integrated with Logic, better than anything else I've seen. I also like the Novation Automap because it allows me to map plug-ins as I want to and then save as a default so any time I open that plug-in in any session it maps back the same. Faders and knobs - old school.

Lastly, what are you working on right now?

I just finished mixing an album for 4AD for a Florida band called Merchandise. They'd started mixing themselves and at some stage realised they needed help to get the intention through. I do quite a lot of work with bands where they've recorded themselves but then they haven't had the practice to mix it as well as it could be done.

Because I've got an analogue aesthetic I tend to strip it all back and de-harsh it and make it fat and big and people go 'wow, that's nice, that's got weight now'. ■

www.garethjones.com

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- WAVES integration
- Library of languages for console labelling including Chinese, English, French, German, Portuguese, Russian and Spanish with more to be added

Cadac Holdings Ltd.
One New Street, Luton. Bedfordshire. LU1 5DX. England.
Tel: +44 1582 404 202
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